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THE

1883. POTATO 1883.

+ How to Cultivate. +

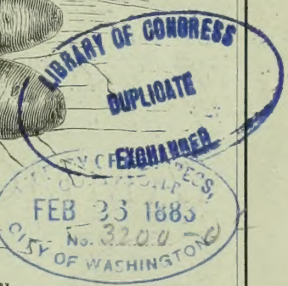
BEST VARIETIES FOR SEED. ILLUSTRATIONS OF THE LEADING VARIETIES.
PREMIUM CROPS AND HOW TO GROW THEM.

Centennial Collection of 500 Varieties.



J.S. PATTERSON SC.

W.T. SEILER CO.



SNOWFLAKE. Showing habit of growth in the hill.

B. K. BLISS & SONS,

Seed and Horticultural Warehouse,

34 Barclay Street, New-York.

— + —

PRICE, 10 CENTS.



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without



HAMMOND'S Slug Shot.

WHAT IS IT?

It is a Potato Bug Destroyer.

The **SLUG SHOT** kills the bug in all stages of its growth. The insect eats it in the minutest quantity, and then appears to become paralyzed, *dying on the leaf without falling to the ground.*

SLUG SHOT was first intended solely for gardens, but its valuable properties have caused it to be adopted for general use.

SLUG SHOT contains in minutest quantity, **POISON!** destructive to all insect life, which is most thoroughly diffused through natural and chemical fertilizers.

SLUG SHOT has been used to advantage TO KILL THE TOBACCO WORM or GRUB, by throwing it over the young plants as a dressing.

The color and odor of **SLUG SHOT** prevents it in any way being mistaken or used for wrong purposes, and its composition is such that it is out of the question for a human being or quadruped to take enough to do any harm. Mr. Hammond, *the originator*, and his men *have worked days and weeks in it without any ill effects whatever.*

FOR POTATO BUGS IT IS GUARANTEED A SPECIFIC.

IS DEATH TO ALL INSECTS UPON VEGETATION.

But while we state the fact that it will destroy worms and bugs upon all plants, and caterpillars on fruit trees, *it should not be used upon EDIBLE FRUITS after the fruit has formed.*

HOW TO APPLY

HAMMOND'S SLUG SHOT.

It is an impalpable powder, and *does not harm vegetation*; on the other hand, it is a manure. *Dust it on the plants plentifully*, either by hand or with a dusting tin.

You can easily make a duster by taking an old fruit can, perforating the bottom, and nailing the can to a stick.

QUANTITY TO AN ACRE.

When plants are small, about 20 pounds is needed; or, *take a handful and throw it over each hill, covering the leaves.* It does no harm to plants, but, on the contrary, invigorates them greatly.

SLUG SHOT is in strong, neat packages, properly labeled, weighing respectively 5, 10 and 15 pounds each. These packages are packed in barrels for the trade. The barrels will hold from 165 to 250 pounds. Each barrel has a large poster and 100 circulars.

In bulk, the barrels contain 200 and 250 pounds each *net*. The price is a half-cent less per pound when ordered in bulk than it is in packages. Price, in packages, 7 lbs. 30 cents; 10 lbs. 50 cents; 15 lbs. 75 cents; in barrels in bulk, 4½ cents per pound. Cannot be sent by mail.

Order given upon application.

SS & SONS, Wholesale Agents,

NEW-YORK CITY.

ILLUSTRATED AND DESCRIPTIVE
CATALOGUE
—OF—
POTATOES FOR SEED,

FOR SALE BY

B. K. BLISS & SONS,

At their Seed and Horticultural Warehouse,

No. 34 BARCLAY STREET,

New York.

—•••—
THE POTATO.

THIS valuable and well-known esculent, now so widely cultivated, is a native of the mountainous parts of tropical America, and was taken to Spain and Italy by early adventurers in the sixteenth century, for we read of its cultivation in those countries in the year 1550. The usual size of the potato in its wild state is rarely more than an inch in diameter, and the flavor very insipid and almost unpalatable.

When first introduced into Europe it created great excitement, of a similar nature to that caused by the introduction of tobacco and coffee; for many years it was only to be found on the tables of the opulent, where it was used as a dessert either in the form of a sweetmeat or as a fruit. The first varieties grown in the United States were brought from Europe. The quality was very poor, and not a variety then in use would at the present time be deemed fit for the table. It is only within a comparatively recent period that it has found its way into both continents as a general article of food for man and beast, or has received attention from agriculturists. Many of our most practical and foremost gardeners are now directing their attention and energies to its improvement and propagation.

In the year 1844, the disease known as the rot appeared and nearly destroyed the whole crop. About this time a few persons, among others the late C. E. Goodrich, of Utica, imported a lot of the wild varieties directly from South America, and proceeded to raise seedlings by crossing with the various kinds then in use. Many thousand seedlings were then produced, but few of them were ever brought to any state of perfection.

One of the principal sorts saved was the Garnet Chili, which had a great reputation, and is the parent of many of our new sorts which are now attracting so much attention. Twenty-five years ago, a farmer who raised one hundred bushels of potatoes was looked upon as having an enormous stock; while to-day, many growers in the vicinity of our large cities raise from ten to twenty thousand bushels, without exciting any unusual attention. Within this period nearly all the numerous varieties with which we are now acquainted have been brought to notice, and every year adds its score of new seedlings to the already overgrown lists. Hundreds of millions of bushels are now raised annually in this country, and the demand is always greater than the supply—the crop of this State alone being twenty-five million bushels, raised on a little over two hundred and fifty thousand acres of land.

The uses of this tuber are numerous, aside from their principal use as an article of food. Thousands of bushels are annually manufactured into starch, and alcohol is distilled from its juices. Even sugar has been made; but with so much competition in this line, it has never proved a great success. Too much cannot be said in favor of this valuable staple, and we shall endeavor to instruct our readers in these few pages as to the methods used to increase the supply, without increasing the expense of its cultivation.

CULTIVATION.

The soil acknowledged to be the best for the potato is a rich loam, sandy, and neither too wet or too dry. A cool, moist soil will produce larger potatoes, but the danger of too much wet is so great that a warmer soil is preferable in this climate. Early potatoes reach their maturity sooner in a quick, light soil, and present a brighter and cleaner appearance, than when dug from that which is heavier. A calcareous formation generally yields a sure crop.

Old sod land, well turned under in the fall, and lightly plowed and harrowed in the Spring, will produce a sound crop, and often an astonishingly large one. Clover sod for this purpose is excellent, and furnishes a large amount of vegetable substance to the ground. When turned under in August or September it will rot by the following Spring, and only a top-dressing of some well-established fertilizer will be required to carry through the crop. Wet land produces a coarse, unpalatable article, and one of little value even as food for cattle. Barnyard manures are of little benefit to such land. Lands should never be plowed while wet and heavy; it injures the soil and does more harm than the manure can offset. Prepare the ground as carefully and thoroughly for potatoes as for any other crop. Attention in this particular well repays the farmer.

Land intended for potatoes requires but little manure, and that should be old and well rotted. By many, spreading the manure before plowing in the Spring is thought to be the best mode. At the time of planting, bone-dust, ashes, plaster, marl and like fertilizers can be used to great advantage with this crop, as they are of a dry or absorbent nature. On wet soils they are very beneficial, as they prevent disease as well as promote the growth of the tubers. On warm, dry, light land, muck compost may advantageously be used; decayed leaves are excellent. In seasons of disease among potatoes, fields where ashes have been used have suffered but little from the rot.

Potatoes are usually planted in drills or hills, the latter being the more common method in this country. Some varieties require more space than others. For drills, two and a half feet by three is ample; while, when planted in hills, three to three and a half feet is the usual distance. The latter method has some advantages, as the cultivator or horse-hoe can be used both ways of the field. Some of the earlier varieties may be planted closer without loss to the crop. Cover about four inches in light soil, and not so deep in the heavier. Cultivation should be commenced soon after the shoots appear above the ground, and weeds should be kept down with as much care as in a carrot-bed. The earth should be drawn a little towards the hill at each hoeing, that the rootlets may gain strength and nutriment from the surrounding earth. When the blossoms appear, hoeing should be discontinued, and in fact is rarely necessary, as the vines then cover the ground and discourage the growth of weeds. An excellent plan is to go over the field occasionally and remove carefully any weeds that appear in the hill, for they draw largely from the sustenance required for the developing tubers.

Many farmers still continue to plant three to five eyes to the hill. In our opinion this is a mistake, and the last few years' experience confirms our views. Potatoes cut *carefully* to a single eye, the hills, perhaps, a trifle closer, will yield a larger crop than the careless way of throwing in seed by wholesale. We all know the effects of too close a growth of carrots, turnips and such roots on the crop, and we think the same rule applies equally to potatoes. Two good eyes to the hill, with a proper proportion of the flesh to each eye, will produce a far larger crop of merchantable tubers than two whole ones; will yield from one-third to one-half more in weight—an item of no small consequence—to say nothing of the saving of nearly one-half the seed. Any intelligent farmer who is up with the times and reads the leading agricultural papers will corroborate this statement.

In order to secure an early crop, the seed must be planted as soon as the ground is in *proper* working order. This time differs in the various parts of our extended country, so that no set time can well be given. The earliest varieties can be marketed in sixty-five to seventy days from planting, thus competing successfully with Southern crops of the more common kinds. A second crop can thus be planted, as described elsewhere, allowed to thoroughly mature, and thus have good seed for another year and a sound article of food for Winter use. The yield of the first planting will give a handsome profit, for *early* potatoes always command a high price when near a city or town. The later varieties do better when planted some weeks after the early kinds; and the farmer has this advantage, he can get the former well started and cultivated before he turns his labor and attention to the latter.

A common method of forcing potatoes is to select whole, sound tubers of some early variety of medium size, placing them close together in a moderately heated bed, composed of either light loam or partially decayed leaves. This should be done several weeks—say three or four—before the time of planting. By that time the tubers will have started sufficiently to be set out. Cut the potatoes into pieces as has been directed, and use care not to injure the young shoots. Plant three inches deep, apply a little horse manure to the bottom of each hill, to afford warmth and to urge forward and nourish the young starting tubers.

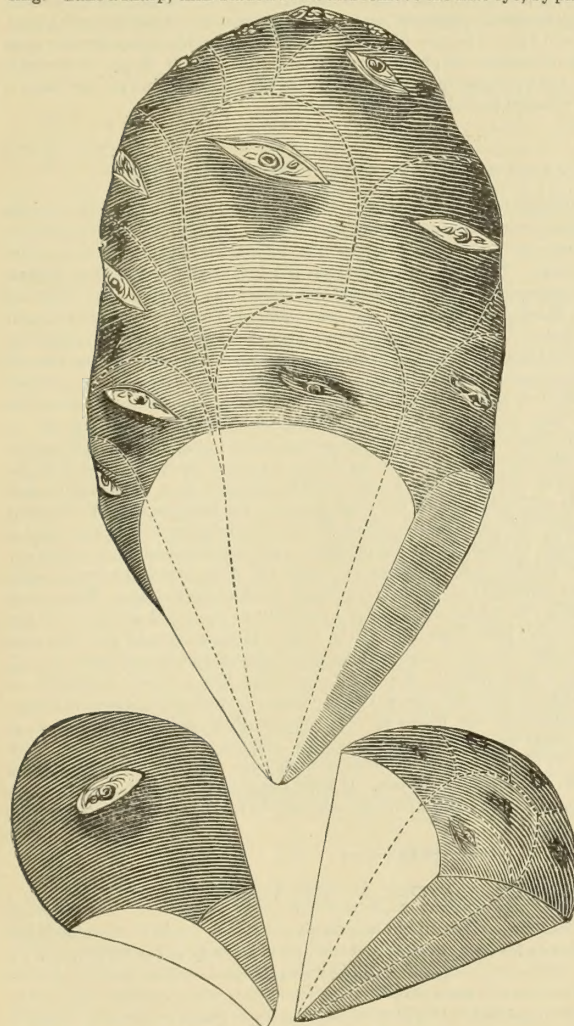
The decay of the tops indicate the maturity of the roots. The later kinds often continue to grow till checked by autumn frosts. They should, however, be dug before the ground is touched by frost at night.

HOW TO CUT TO A SINGLE EYE.

Take any potato and hold before you, with the stem end (the place where it was joined to the vine) down. It will then be noticed that the eyes are arranged around the tuber in regular ascending rotation from the bottom to the top, similar to the thread of a corkscrew, each eye being a little above and further around the side than the one next below it. Now take the potato in the left hand, with the stem end down, keeping it in a perpendicular position throughout the entire cutting. Take a sharp, thin-bladed knife and remove the first eye, by placing the knife about equally

distant between it and the eye next in rotation above it, sloping it to the indenture left by the stem (see dotted lines in center cut), removing the flesh with it. When the first eye is removed, turn the potato around in the hand until the next eye above appears. Remove this one in the same manner, and keep on turning the potato, removing each eye as it appears in exact rotation, always sloping the knife to the stem. After three or four eyes are thus removed, the bottom part of the tuber will have a somewhat pyramidal form (see center cut). It will be noticed that each eye removed has a similar form to that represented by the cut on the left, and has its proportionate share of the flesh attached.

After the first two eyes are removed no further trouble will be found until the seed end is reached, and only a little extra care will be required to remove these closely clustered eyes. The cut on the right represents what remains of the potato after all but the small eyes are removed, while the dotted lines show how to separate each of these. It will be noticed that the base retains the same form throughout, and by sloping the knife each time, and cutting down to the apex of this inverted pyramid (which is the center



ter of the tuber), each eye will be supported by an equal amount of the flesh which is to start it into a strong, healthy growth. With common varieties, where seed is cheap, many will think this manner of cutting too troublesome. But if every farmer should save one-half his seed, as he easily could do (for it will only require two barrels of sets for an acre, instead of four, as is usually planted, the increase being equal), thousands of bushels would annually be saved, worth many thousands of dollars. But to those who wish to obtain a large increase from a small quantity of seed, as is necessary to those who buy the new and valuable varieties, this manner of cutting so that every eye is saved will prove invaluable.

CUTTING.

This is one of the most important subjects to be considered in the propagation of potatoes, and there is such a diversity of opinion regarding the manner and method of cutting, that many pages could be filled in giving the different experiences of the professors in this art. While we do not attempt to decide this question to the satisfaction of every one, we shall give our own views, and claim that in our method an enormous quantity of the tubers now annually planted may be thrown into the market, causing a reduction in the prices charged for this common and necessary crop. Without discussing the respective merits of planting whole potatoes, or half a dozen pieces, each piece containing three and four eyes, in a hill, we shall state, what has been proven by so many cultivators, that two good eyes are ample for one hill, and the yield of large, marketable potatoes is larger than when more are planted. With the aid of the cut and remarks on page 3, we trust our readers may be enabled to understand our method.

HOW TO RAISE FROM CUTTINGS.

For this purpose any ordinary hot-bed may be used. About the 1st of March take the potatoes to be propagated, dividing them lengthwise, and laying these pieces with the cut side down upon the soil of the hot-bed. Keep them perfectly dry until the cut part has healed over and the sprouts have commenced to start. When the sprouts reach the height of three or four inches, cut them off about half an inch above the eye, and insert the end of the cuttings thus obtained into the soil of the hot-bed. Shade them from the sun, and water carefully until they are well rooted and the leaves begin to develop. The old pieces of the potato will continue to throw up shoots to an almost incredible number, and these are all to be removed as soon as strong enough in the same manner as the first ones. In order to increase the crop still more, as soon as these cuttings have reached the height of eight inches, their tops may also be removed and planted in the same manner as the slips from the potato. As soon as the ground becomes warm and can be worked, prepare it as is usual in planting the tubers, and set out these young plants. It is best to transplant them on some cloudy day or towards evening, as the hot sun withers them and destroys many if planted in the hot part of the day. These plants will be found to grow very rapidly, and can be propagated indefinitely from cuttings of the older plants. No cuttings should be taken after the 1st of August, as they will likely be destroyed by the cold weather before the crop is matured. The immense increase of stock by the use of this method may be illustrated as follows: A pound usually contains four medium-sized potatoes, and there are from twelve to twenty eyes on each tuber. When cut and sprouted they will give, at least, five hundred plants. From each of these plants *three* cuttings may be taken, which gives a total of two thousand plants to be set in the ground. With the ordinary yield, each hill, at the lowest estimate, would give one and one-half pounds, or three thousand pounds; in all making about eighteen barrels of good, sound potatoes, or a year's supply for a large family. We do not claim that this is either profitable or advisable with the common sorts of potatoes; but with the many new and high-priced varieties which are now being disseminated at the prices of one, two, or three dollars a pound, it is almost invaluable, as for a slight expenditure a large stock may be obtained, paying to the propagator a thousand-fold. This is no new experiment, but has been practiced by the initiated for the last few years, and has ever proved a success. It is not confined to hot-beds, but many of our most prominent nurserymen have devoted whole greenhouses to this use, and we would confidently recommend it to our readers.

TWO CROPS A YEAR.

Take good, sound, early potatoes, and cut them into single eyes, as is shown in the article on cutting. Allow these pieces to dry for a day or two, and then plant as early as the ground can be worked (a slight frost will not injure the potato after being well planted). With ordinarily favorable weather the new crop of tubers will mature in from eight to ten weeks. As soon as they are ripe, dig them, and after remaining a day or two in some dry and warm place, proceed to cut them into single eyes as before. Place the pieces thus obtained into pans or boxes containing dry plaster or gypsum. This absorbs the abundant moisture, which would otherwise greatly check the growth if it did not destroy the sets entirely. Allow them to remain in the plaster for ten or twelve days, or until the eyes commence to start, when they are to be taken out and planted as before. In the latitude of New York this is only applicable to early varieties, like the famous Early Rose, or Extra Early Vermont, which are of quick growth, and early maturity; but in many parts of the South, where the growing season is long, it may be practiced indiscriminately upon all varieties. A gentleman has raised *two* crops of Early Rose, a short time since, in this vicinity,

the two crops yielding an aggregate weight of twenty-five hundred pounds. He planted his pound, cut into single eyes, early in March, and dug his first crop about the middle of May. These were then treated as above described and planted the 10th of June, and the second crop dug the 1st of September. The yield from the one pound at the first digging was fifty pounds, and the second crop of this increase was twenty-five hundred pounds, or over forty bushels. This method is within the reach of all, and there is no extra expense incurred for hot-bed sashes or any other forcing requisites.

HOW TO RAISE SEEDLINGS.

Save any well-ripened seed-balls from a good variety, and plant in early Spring, in well-drained boxes of sandy loam. Sow the seed on the surface, and sift fine soil over them to the depth of one-quarter to one-half an inch; water sparingly, and when the seedlings are three inches high, remove them from the seed box without disturbing the earth around them more than is necessary, and plant in more roomy quarters. Many successful growers, however, prefer sowing the seed in open ground, when a partially shaded spot may be selected, and the seeds may be sown in drills about ten inches apart; cover with half an inch of soil. When the plants are strong enough, transplant in rows three feet apart, two feet in the rows, and keep down the weeds until the tubers ripen. Some few strong growing varieties, will form tubers weighing from six to eight ounces the first year. As a general rule they will be about the size of a walnut. The seed we offer this season, "**Pringle's hybrid**," is far in advance of any hitherto offered, as will be seen by referring to the description on page 32. Store the tubers carefully until the next season, keeping them as cool as may be without freezing, when they may be planted in the same manner as any mature potato.

It usually takes three years to ascertain the true value of a seedling, and if a person is favored by finding one really good variety among the many seedlings, he may feel well repaid for his time and trouble. Many new varieties are raised by hybridization, which is a more difficult method, although it generally secures a greater number of good varieties. The manner of procedure is as follows: Remove all flowers excepting those you wish to hybridize, then with a pair of sharp scissors remove all the anthers from the stamens in the flowers to be impregnated, just before they commence to discharge their pollen. When the flowers are dry, shake the flower containing the stamens of the variety which you wish to cross with it, being careful to do it when they are ready to discharge their pollen. Fit a piece of fine netting over the impregnated flower, to prevent the bee and other insects from leaving the pollen of other varieties upon the exposed pistil. The covering may be removed after two or three days. Do not disturb them again until the seed-ball has ripened, when the treatment as given in the first part of this article may be applied.

Instances have been known, though rare, where one potato would produce two distinct sorts from its different buds or eyes. The White Peachblow, for example, has been found growing on the same stalk with the Jersey Peachblow. As so much interest is now excited in the growth and propagation of new seedlings, and many of the new varieties command such high prices—it behooves our farmers and amateur gardeners to avail themselves of the latest and, by actual tests, the best method of producing new varieties.

HOW TO STORE AND KEEP.

It is a matter of no small importance to the farmer to be able to keep his crop of potatoes in good condition through our long Winters, and to present them for sale, free from blemish or mildew, in the Spring. A well-kept potato brings three or four times its value in market in early Spring than the same stock will if sold in the Fall, paying an extra profit over and above the cost of storing, handling and care required.

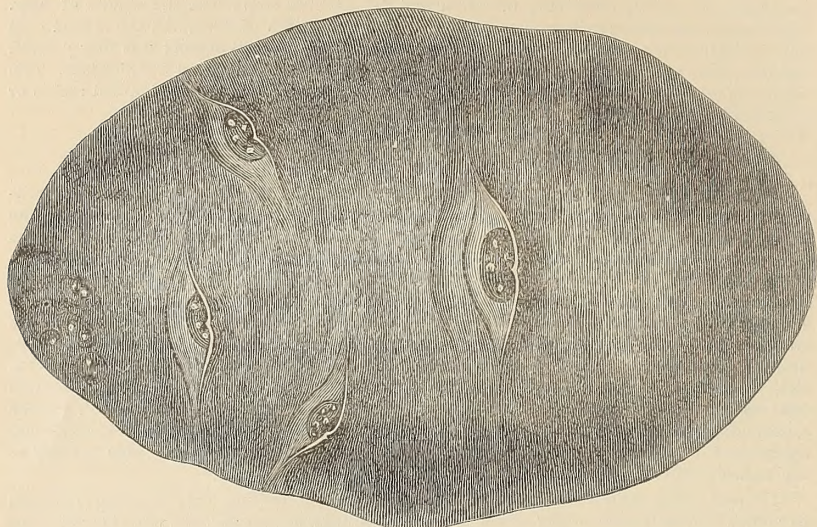
Of the three methods of storing in general use, each has its champions. They are: storing in barrels, bins, or heaps or pits. The advantage of placing in barrels is, they can be easily handled, do not suffer from abrasion, can be readily looked over, and if *disease presents itself* it can be checked or removed.

When thousands of bushels are raised on one farm, this method cannot be followed on account of the time and expense involved. Bins are largely used by our fore-handed farmers, especially those near large cities, as the roots can at any time be reached and got ready for market. A dry, cool, well-ventilated cellar, with the light excluded, is the best place to store potatoes. It has been found very advantageous in preventing decay to sprinkle lime in the barrels or bin at the rate, say, of one pound to each barrel. It acts as an absorbent and neutralizes the earthy odors, thus directly acting as a preventive of decay to the roots.

The importance of excluding light from potatoes and keeping them as cool as possible, cannot be over-estimated as means of preserving the crop.

New Varieties of 1883 not Before Offered.

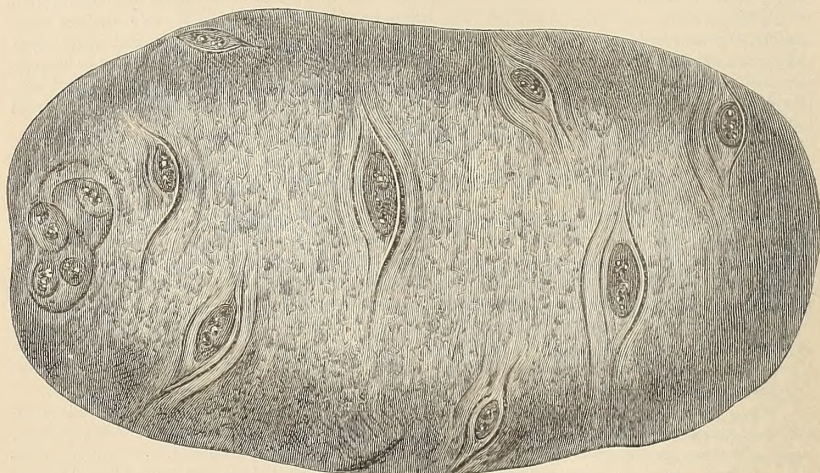
Although now offered for the first time, the following varieties have been carefully tested in various parts of this country, and have met with the unqualified approval of all who have given them a trial.



ROSY MORN.

This valuable new Potato was raised from Pringle's Hybridized seed in 1875, and is evidently a cross between Peachblow and Early Rose. During the first years, from seed, its Peachblow parentage was strongly marked, while in the last three or four years it has gradually changed to the color and appearance of the Early Rose, so that now it closely resembles that variety, except in its eyes, which are smaller and smoother. In quality, however, it is decidedly superior, being solid and sound, and cooking white and mealy. It yields nearly or quite double as much as the Early Rose, planted side by side and under the same conditions. It is also more inclined to form seed-balls. Its special value, however, consists in its great earliness, and in its fitness for cooking sooner after planting than any other kind.

Price, \$1.00 per pound; three pounds to one address, \$2.50, by mail, post-paid. By express or freight, at the expense of the purchaser, half peck, \$3.00; one peck, \$5.00; half bushel, \$7.00; one bushel, \$12.00; bbl., \$25.00.



RUBICUND.

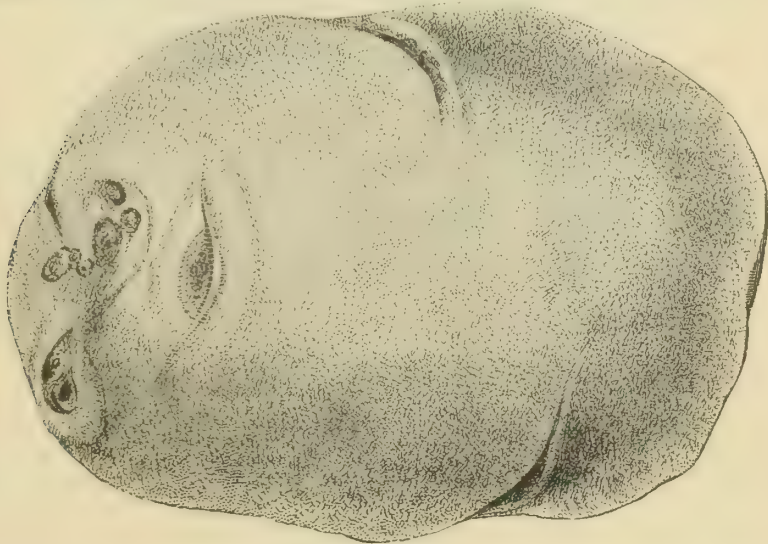
A seedling produced by fertilizing Early Rose with White Peachblow, and raised the same year as the preceding. From its first growth its vigorous and healthy appearance attracted the attention of its originator, who selected it from a large number of seedlings for future trial and propagation. It has since fully met the expectations placed upon it, and we confidently offer it now as a novelty of superior merit. Its color is of a peculiar reddish bronze, with bright purplish lines near the eyes; its shape is longish oval, pointed and somewhat depressed; size, uniform medium to large. It ripens medium late, and in quality ranks with the best. In hardness and vigorous growth of vines, as well as in productiveness, it has few, if any, equals, and as a reliable Winter-keeping Potato it is not excelled by any other kind.

Price, \$1.00 per pound; three pounds to one address, \$2.50, by mail, post-paid. By express or freight at the expense of the purchaser, half peck, \$3.00; one peck, \$5.00; half bushel, \$7.00; one bushel, \$12.00; bbl., \$25.00.

POTATOES. Varieties of 1882.**BROWNELL'S BEST.**

This new seedling, originated by E. S. Brownell in 1875, belongs to that well-marked and excellent strain of Potatoes represented by the Snowflake, Pride of America, and a few others. In appearance it differs not materially from these well-known varieties. Its color is white, shading to russet; shape oblong, somewhat flattened; eyes few and entirely smooth; flesh white, fine-grained, floury, and of the purest flavor. The tubers grow compactly in the hill, and are remarkably uniform in good medium to large size. It ripens second early, and is equally valuable as an early market as for a Winter Potato. Its yield is enormous, 16 bushels having been raised on 5 rods of ground. Taking all in all, we do not hesitate to assert that the highest perfections in shape, in size, in yield, and in quality are combined in this new variety.

Price, 50 cts. per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at the expense of the purchaser, half peck, \$1.00; one peck, \$1.50; half bushel, \$2.25; one bushel, \$4.00; barrel, \$8.00.

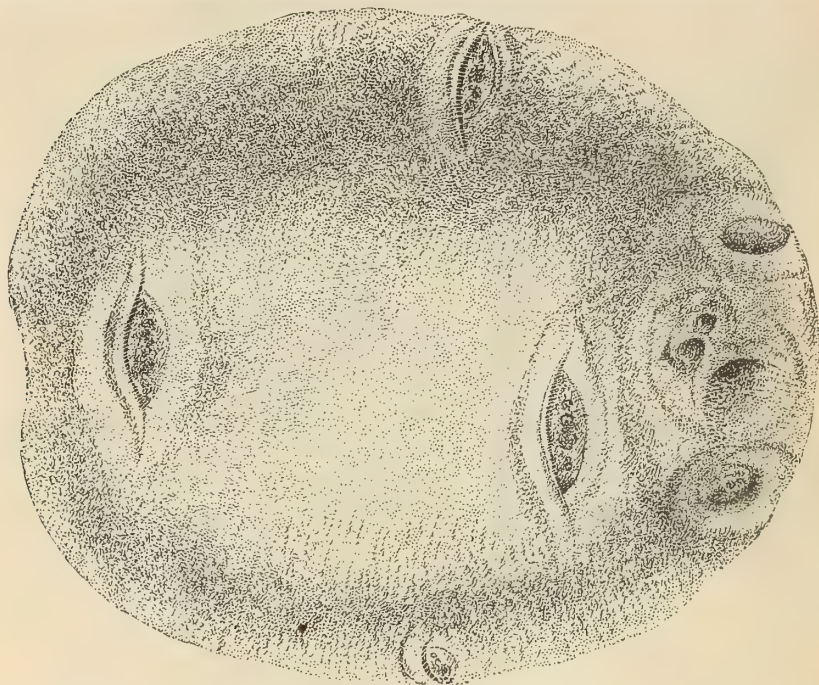
**EARLY HOUSEHOLD.**

A seedling raised from Pringle's Hybridized Potato-seed, selected from a large number of seedlings on account of its extreme earliness combined with excellent quality. The tubers are large, short cylindrical, flattened or indented on one side; skin and flesh white, quality first-class in every respect. It clusters compactly in the hill, and has never shown any signs of disease in foliage or tuber; ripens a few days earlier than Early Rose, and excels it in hardness as well as productiveness. It is of distinct and handsome appearance, and cannot fail to become a leading early market variety.

Price, 50 cts. per pound; three pounds, \$1.25 by mail, post-paid. By express or freight, at the expense of the purchaser, half peck, \$1.00; one peck, \$1.50; half bushel, \$2.25; one bushel, \$4.00; barrel, \$8.00.

VERMONT CHAMPION.

The persevering efforts of Mr. A. Rand, of Vermont, the originator of this new variety, have already given us some of the best and most valuable Potatoes in cultivation. His aim has always been to select for parent stock varieties that have by experience proved to possess some special desirable qualities, which, in a higher degree than others, would be transmitted to their progeny. Compton's Surprise and White Peach Blow were found of superior value for this purpose, and have been largely experimented with. A great number of seedlings were produced by crossing these two varieties, and after six years' trial, this one—the Vermont Champion—was selected, not only as possessing more



Vermont Champion.

good qualities than any other, but as one of the most valuable varieties ever cultivated. It is of large size, roundish oval form, has a silvery white skin and white flesh; its flavor is pure and delicate. It is a good cropper, and keeps well. A first-class certificate was awarded to this variety by the Royal Horticultural Society of London, England.

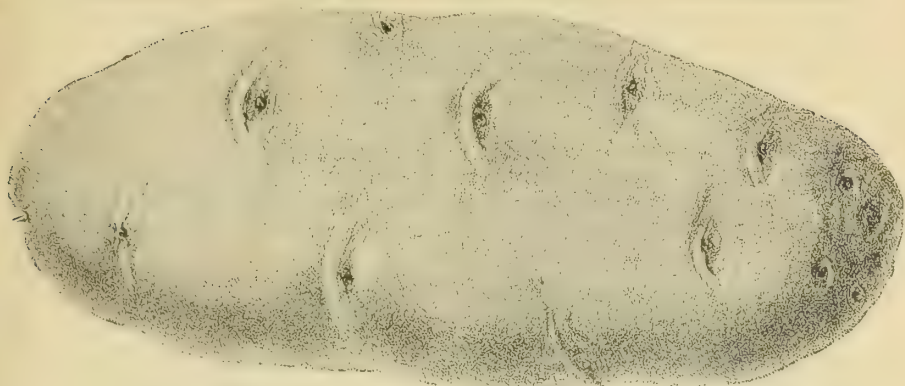
Price, 50 cts. per pound; three pounds to one address, \$1.25 by mail, post-paid. By express or freight, at the expense of the purchaser; half peck, \$1.00; one peck, \$1.50; half bushel, \$2.25; one bushel, \$4.00; bbl., \$8.00. When the *three varieties* are ordered, we make the following deductions: One pound of each, \$1.25; three pounds of each, \$3.25, by mail, post-paid.

VARIETIES OF 1881.

WHITE STAR.

This superior variety is unquestionably one of the very best in cultivation. It was extensively grown the past year by many of the largest growers in the country, and all agree that it is one of the most hardy, prolific, and best keeping varieties they have tested. All the good qualities claimed for this variety when first introduced have been fully maintained, and we can recommend it with the greatest confidence as deserving a prominent place in every collection.

The originator reports having selected it in 1875 from a collection of seedlings, raised from seed-balls of the **Excelsior**, fertilized with pollen from the **White Peach Blow**. The foliage is dense dark green; vines strong, stocky, and vigorous, on which account it is well calculated to resist the ravages of the Colorado beetle. The tubers are oblong, large, uniform, and handsome; while in yield it has proved remarkably prolific, and so far has effectually resisted blight. It is medium early, and not the least important feature of this new potato is its excellent keeping qualities. In this respect it excels any other sort we know of. Whether baked or boiled, its cooking qualities are faultless; its



WHITE STAR.

purity of color, fine floury texture, and delicious flavor being unexcelled by any other variety. It is with great pleasure we introduce the **White Star Potato**, feeling confident that its many merits will be duly appreciated, and secure for it high rank amongst its many competitors.

Price, 50 cts. per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at the expense of the purchaser; one peck, \$1.00; half bushel, \$1.50; one bushel, \$2.50; bbl., \$6.00.



ADIRONDACK.

This new variety is the result of a hybridization of a favorite sort with the **White Peach Blow**, and takes precedence over that well-known standard sort on account of

several distinct and commendable features. In habit, the vines are readily distinguished from those of the **White Peachblow**, being more upright; the foliage is bright green, and the individual leaves rather large, which imparts a vigorous and robust appearance. The roots take a strong hold on the soil, enabling it to resist the evil effects of a prolonged drouth. It may be classed as a medium or second early variety. The tubers are red-skinned, remarkably symmetrical, being almost a perfect ball, and grow more in clusters than in the parent variety. It possesses excellent table qualities, being pure white in flesh, floury, and of faultless flavor. It is an abundant cropper, while its keeping qualities have so far been perfectly satisfactory.

Price, 50 cts. per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at the expense of the purchaser; peck, \$1.00; half bushel, \$1.50; one bushel, \$2.25; bbl., \$5.00.

WALL'S ORANGE.

This new late variety originated with one of the most careful and successful farmers and Potato raisers in Monroe Co., N. Y. It originated from a seed-ball of a local variety, which has been known in that vicinity for years, and highly prized as one of the finest table Potatoes known in that vicinity. This new seedling resembles its parent in shape, but in productiveness far surpasses it, even with ordinary farm or field culture. It is said by competent authorities that as a table potato it is unsurpassed; at all events, no better could be desired. Its color is a distinctive feature, being of a decided orange hue, from which it derives its name. The originator says of it: "For quality and productiveness, I know of no variety equaling the Wall's Orange. It is about the strongest grower I ever saw, vines completely covering the ground, and as nearly bug-proof as possible. Growing in my experimental field, beside other varieties, which were bugged several times, they took care of themselves, and were the last to succumb to the drouth."

Price, \$1.00 per pound; three pounds to one address, \$2.50, by mail, post-paid. By express or freight, at the expense of the purchaser, half peck, \$3.00; one peck, \$5.00.

TYRIAN PURPLE.

This medium early variety is a sport from Compton's Surprise, which, after careful experiments under varied conditions, has maintained the distinctive features that first claimed attention. The tubers are well shaped, of a round, oblong form, not unlike Early Rose, while in size it is medium and uniform. The skin is a dark purplish-red; flesh pure white and very firm, and when cooked, floury and of good flavor. It is an excellent keeper, and on account of its many merits, we believe every potato cultivator would do well to give it a trial.

Price, 50 cts. per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at expense of purchaser, one peck, \$1.50; one bushel, \$5.00.

JUMBO.

A new variety from Western New-York, which was grown the past season by two of the largest cultivators of potatoes in this vicinity, and pronounced by them as one of the very best for general cultivation. They stood the drouth of the past summer remarkably well, and produced a large crop, when some others were entire failures. Vines vigorous, short jointed, compact, of a deep-green color; tubers nearly round, slightly flattened; skin white, eyes small; flesh white, of fine flavor. It is a medium early variety, an excellent keeper, and when better known will be one of our most popular sorts.

One pound, 50 cts.; three pounds, \$1.25, by mail; \$1.25 per peck; \$4.00 per bush.; \$8.00 per bbl.

GARFIELD (Landreth).

See cut on page 16.

A seedling of Early Vermont hybridized with Excelsior. In form resembling the first, and in quality and color the second. Later than the Vermont, larger and more productive. Flesh pure white, fine grained, and mealy; vines stocky; tubers produced closely about the roots, and uniformly large. As a market variety it will prove very valuable.

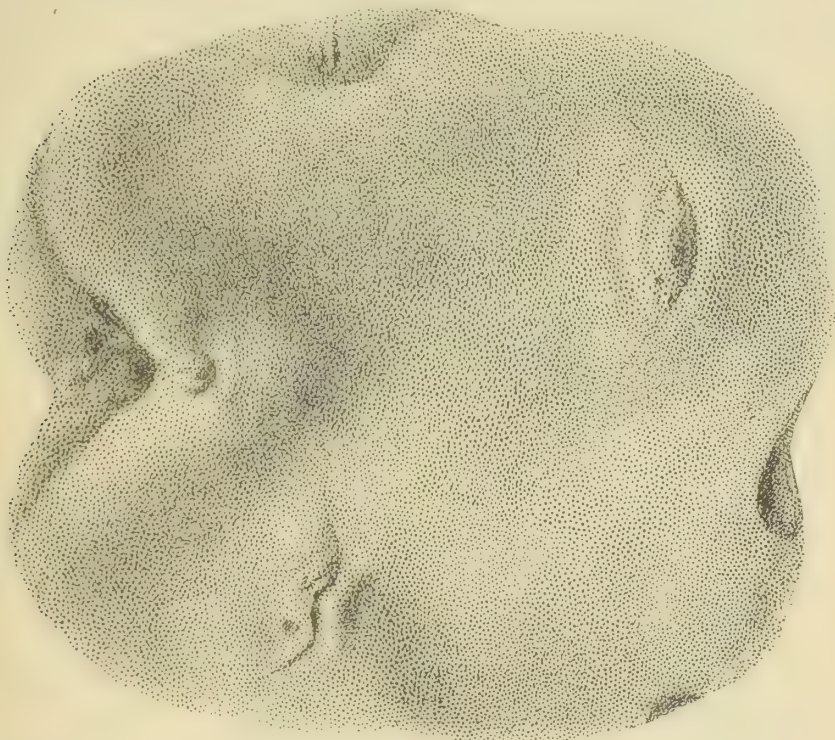
One pound, 50 cts.; three pounds, \$1.25, by mail; \$1.25 per peck; \$4.00 per bush.; \$8.00 per bbl.

POTATOES. Varieties of 1880.

AMERICAN MAGNUM BONUM.

Quite distinct from the English Potato of the same name.

During the past season this variety has been subjected to the most critical tests by eminent agriculturists in many sections of the country. From all quarters the report

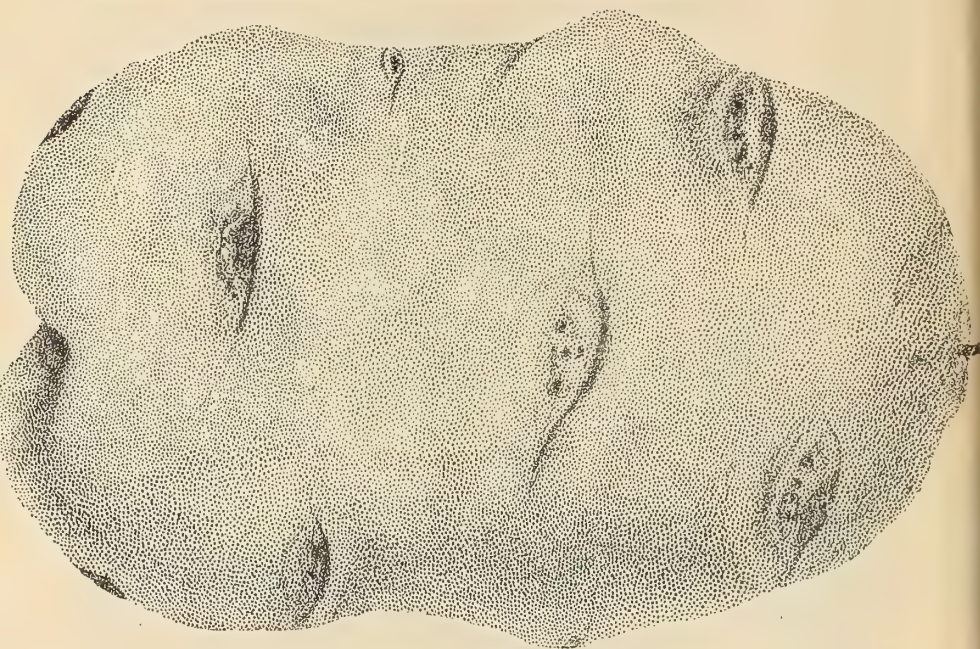


comes that it possesses several of the most essential qualities to render it a standard sort wherever introduced. It is an early variety, maturing a few days after the Early Rose, while in productiveness it far surpasses that popular variety. The tubers are uniform in size, unusually large, of excellent table qualities, free from disease, and keep well. The raiser describes it as "a seedling of Peach Blow; vines vigorous and erect; tubers nearly round, flattened at the ends; russety-white skin; small pink eyes; flesh snow white, and, whether boiled or baked, very floury and of a pleasing nutty flavor; has yielded at the rate of 600 bushels per acre." We recommend it to our customers as worthy of a trial.

Price per peck, 75 cts.; per bush., \$2.00; per bbl., \$5.00. By mail, 50 cts. per lb.; 3 lbs., \$1.25.

QUEEN OF THE VALLEY.

One of the most prolific varieties in cultivation. Season medium; tubers very large, hardly any small ones; shape long, flattened, somewhat square cut at the ends;



QUEEN OF THE VALLEY.

color, deep pink at the seed end, gradually changing to almost white at the stem end; cooks mealy without falling into pieces. Leaves large, thick, and dark green. The vines are large and unusually vigorous, protecting the ground from the direct rays of the sun, and resisting disease more than most other kinds which were grown with it. Its only fault, as a table potato, might be found in its enormous size, but its immense productiveness will, no doubt, make it of great value to all who appreciate the nutritive properties of potatoes as food for live stock of all kinds.

Price, \$1.00 per peck; \$2.50 per bushel; \$6.00 per bbl. 50 cts. per pound; three pounds, \$1.25, by mail, post-paid.

THE WHITE ELEPHANT.

This superb late variety was produced from a seed-ball of the "Garnet Chili," fertilized with pollen from the "White Peach Blow," and combines the best qualities of both varieties, viz.: *wonderful productiveness, excellent quality and flavor, power of resisting disease, and great beauty*, not to mention the fact of its being proof against decay until far into Spring. These qualities alone would recommend it, not only for field culture, but also for the private garden. From its origin it may be called a twin-brother of the "Beauty of Hebron," which it resembles in many respects, possessing many of those qualities which have rendered this latter variety so justly popular. Last season the originator planted one bushel of sixty pounds of "THE WHITE ELEPHANT" on one-eighth of an acre of ordinary soil, and therefrom harvested no fewer than fifty-seven bushels. The tubers, notwithstanding their great size, are **always solid**, and, growing closely together in the hills, the labor of digging is comparatively slight. The vines are very stout and vigorous, and have thus far resisted all manner of blight, turning yellow only at the proper season, and the potatoes ripening along with the "Late Rose."

Price per bbl., \$4.50; per bushel, \$2.00; per $\frac{1}{2}$ bushel, \$1.25; per peck, 75 cts.; per $\frac{1}{2}$ peck, 50 cts.; or one pound by mail for 50 cts.; three pounds, \$1.25.

THE AMERICAN GIANT.

One of the largest varieties in cultivation, as well as one of the most productive.

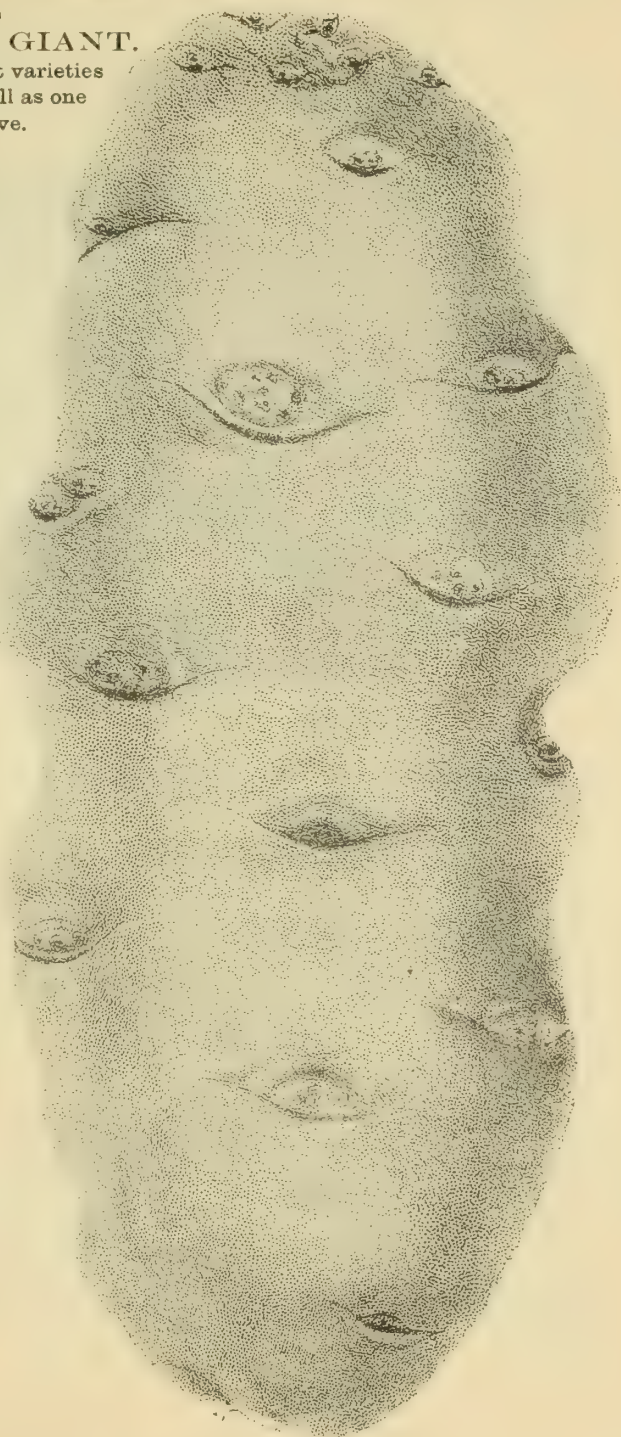
This fine variety originated in western New-York, and is thus described by the raiser: Vines vigorous and healthy, tubers of an unusually large size, grow compactly in the hills, easily dug, cooks well either by baking or boiling, of good flavor, and excellent keepers. It is a second early variety, and matures the crop about two weeks later than the Early Rose. On account of its large size it will be particularly desirable to grow as an exhibition variety.

Price, per peck, \$1.25; bush., \$3.50; bbl., \$7.00. By mail, 50 cts. per lb.; 3 lbs. \$1.25, post-paid.

A NEW SQUASH.

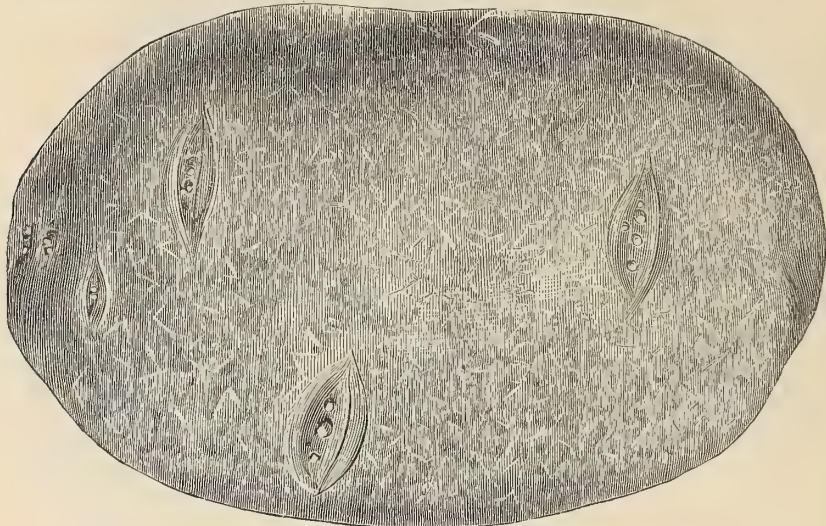
Perfect Gem.

—Excellent both as a Summer and Winter Squash, having the best properties of both classes. It is of a creamy white color, thinskin, with fine grained, sweet, deliciously flavored flesh; a free grower, very productive, and of excellent keeping qualities. Per pkt., 15c.; oz. 30; $\frac{1}{4}$ lb., 75; lb., \$2.50.



GENERAL COLLECTION.

The following varieties, **Pride of America**, **Silver Skin**, and **Matchless**, first offered by us in the Spring of 1880, have met with general favor wherever they have been introduced. At the International Potato Exhibition in England in the Fall of 1880, they occupied a prominent place in nearly all the collections which took the highest prizes—their success in this country has been equally remarkable—and they will be largely grown the coming season.



PRIDE OF AMERICA.

This superb variety was raised several years since by Mr. E. S. Brownell, a celebrated hybridizer in Northern Vermont, to whom we are already indebted for a number of well-known and valuable varieties. It was raised from a seed-ball of the **Eureka**, fertilized with the pollen of the **White Peach Blow**, and combines the wonderful productiveness and excellent keeping qualities of the former with all the well-known qualities of the latter.

It has been carefully tested by several of our most experienced growers in various parts of the country for the past four years, all of whom have given it their unqualified approval. In appearance it closely resembles the well-known **Snowflake**, and may be easily mistaken for that favorite variety. It ripens a few days later, and has the advantage over that variety in being adapted to a greater variety of soils, much more productive, growing to a larger size, and producing but a very few small tubers, nearly all being of a good marketable size; it is a most excellent keeper, and, so far, has shown no signs of disease. In quality it is fully equal to the **Snowflake**; flesh exceedingly fine grained and of snowy whiteness either baked or boiled, cooks through quickly and evenly, dry and floury, has no hard center or core, as a table variety is absolutely without a fault. In habit of growth the vines are of medium length, well covered with a light green, stocky foliage; the tubers grow compactly in the hill, so that the crop can be easily harvested. It is an excellent keeper, and retains all its good qualities throughout the entire season.

In the Spring of 1878 we sent about thirty of our choicest seedlings, under numbers, to Prof. Tracy, of the Mo. State Agricultural College, for trial. In his report he pronounces this variety the best of all. A gentleman of large experience, who has tested this variety, says:

"I have grown this variety for the past two seasons, and find it all that can be desired. Its smooth, handsome appearance, combined with its great cropping and remarkably fine table qualities, make it one of the most desirable varieties I have ever grown, and I have grown all the new varieties of any note introduced for the past ten years. I consider it much superior to the famous **Snowflake** in every particular. It is so far entirely healthy, grows but few small tubers, no hollow core at the center, and is one of the best keepers I ever saw. I do not hesitate to say, all things considered, that it is the best potato I ever grew—it has no fault that I can find."

Price, 50 cents per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at the expense of the purchaser; one peck, \$1.00; half bushel, \$1.25; one bushel, \$2.00; bbl., \$5.00.



NEW EARLY POTATO—TELEPHONE.

From a box of samples sent for table test two years ago, this variety was selected as being of really superb quality, and since that time it has been so favorably commented on as a superior table potato, that we have pleasure in calling the attention of our customers to it. It may be described as a second early, of vigorous growth, very productive, and so far, has proved an excellent keeping variety. In shape it is an oblong round, slightly flattened at one end, and its uniform size and handsome appearance seldom fails to attract attention. The eyes are remarkably shallow and few in number; skin russety white; flesh pure white, fine grained, flaxy, and of excellent flavor, whether baked or boiled.

Price, per pound, 50 cts.; three pounds, \$1.25, by mail, post-paid. By express or freight at purchaser's expense, per half peck, \$1.00; peck, \$1.50; half bushel, \$2.25; bushel, \$4.00; bbl., \$8.00.

MATCHLESS.

See Cut on Next Page.

This excellent variety was raised in 1875 from a seed-ball of the Early Rose, fertilized with the White Peach Blows—since which it has been thoroughly tested in various localities, both in this country and in Europe, and has given general satisfaction. The vines are upright, of medium height, vigorous and healthy; foliage dark green. The tubers are generally round, sometimes oblong, occasionally flattened; very handsome and symmetrical in form; skin slightly russeted, pale red, except the eyes and seed end, where it is much brighter. Flesh fine grain, pure white, of excellent quality; cooks through quickly and evenly. It is a great cropper, an excellent keeper, has never yet shown any signs of disease—eyes slightly depressed. It ripens with the Peerless, and will be found equally valuable for the general crop. Its attractive appearance, great productiveness, and fine quality, will make it one of the most valuable varieties for the market.

Price, 50 cents per pound; three pounds to one address, \$1.25, by mail, post-paid. By express or freight, at the expense of the purchaser: one peck, 75 cts.; half bushel, \$1.25; one bushel, \$2.00; bbl., \$4.50.



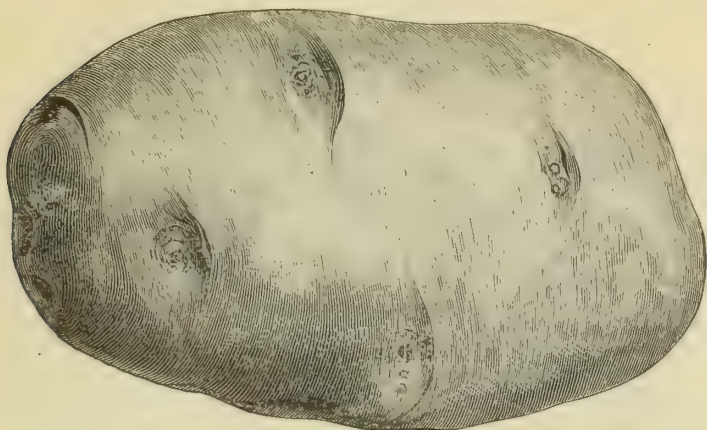
MATCHLESS.

See description on page 14.



GARFIELD.

See description on page 10.



CLARK'S No. 1.

This seedling originated in New Hampshire in 1876. It is earlier than the Early Rose, and will yield from a quarter to a third more crop. It bears a close resemblance to Early Rose in appearance. It cooks mealy, is of excellent flavor, and is every way a capital variety for either the farmer or market-gardener. This potato was held in such high estimation that the entire crops of 1877 and 1878 were purchased by the Government for distribution in the South and West. 450 bushels have been raised on an acre, and 22 bushels from one peck of seed.

Price by mail, 50 cents per lb., 3 lbs. \$1.25. By express, per peck, \$1.00; bushel, \$3.00; bbl., \$6.00.

MAMMOTH PEARL.

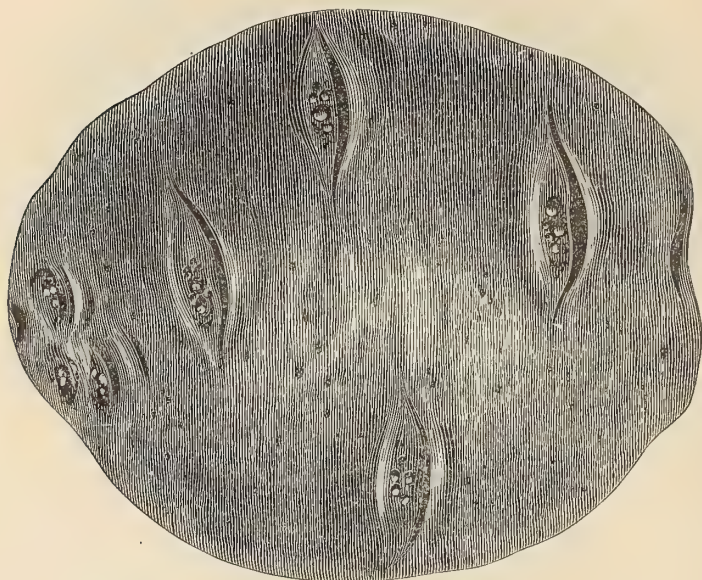
This variety, introduced last season, has proved a great favorite wherever tried. It is described as follows by the originator: "This new and wonderful variety of potatoes was originated in Ohio, and selected from over 2,500 seedlings. Sure to produce a crop in spite of the bugs. Of good table qualities, handsome in appearance, free from rot, and never hollow; skin white, and flesh whitest of any variety. For the table it cooks like a ball of flour. Eyes few and even with the surface; in shape oblong to round. It ripens in August, very productive, yielding double any ordinary variety." *By mail, 50 cts. per lb.; 3 lbs., \$1.25. By express, per peck, 75 cts.; half bush., \$1.00; bush., \$1.75; bbl., \$4.50.*

LATE SNOWFLAKE.

This new and valuable variety originated in northern Vermont, and was first discovered while harvesting a field of the Early Snowflake in the summer of 1875. Several hills were noticed—evidently the product of one potato—the vines of which were quite green and in a growing state, while those of the early variety were quite dry and the crop fully matured. They continued growing for several weeks, and upon harvesting the crop the tubers were found to be exact counterparts of the Early Snowflake in form, size, color and general appearance, but much more productive. In quality they are fully equal to the Early Snowflake. They have been cultivated for the past three years and found to maintain their distinctive characteristics. We offer this variety on its own merits.

A potato combining all the good qualities of the Early Snowflake—which is the best variety introduced since the Early Rose—more productive and ripening its crop so as to be ready for use after the early crop is disposed of, cannot fail to be a valuable acquisition.

Prices by mail, 50 cts. per lb., three lbs., \$1.25. By express or otherwise, purchaser paying freight, \$1.00 per peck, \$2.50 per bush., \$5.00 per bbl.



BLISS'S TRIUMPH.

This new and beautiful variety is, without exception, the most attractive in appearance of any that we have yet offered, and will also compare favorably with the best of them in quality. It originated in the State of Connecticut, several years since, and has been faithfully tested by the originator, and found to maintain its good qualities from year to year. It was raised from a seed ball of the well-known Peerless crossed with a seedling of the Early Rose. It combines the wonderful productiveness of the Peerless, with all the good qualities of the Early Rose, is much more productive, and matures its crop at least ten days in advance of that favorite sort, before the second crop of beetles appear. In color and form it resembles the Garnet Chili, though greatly improved in form and quality. Tubers of medium size, round and uniform in shape, with but a very few small ones, eyes slightly depressed, color a beautiful light red, strongly resembling the early varieties from Bermuda; flesh fine grain and of excellent flavor. Vines about two feet in height, erect, with but a few lateral branches, covered with long, dark-green foliage.

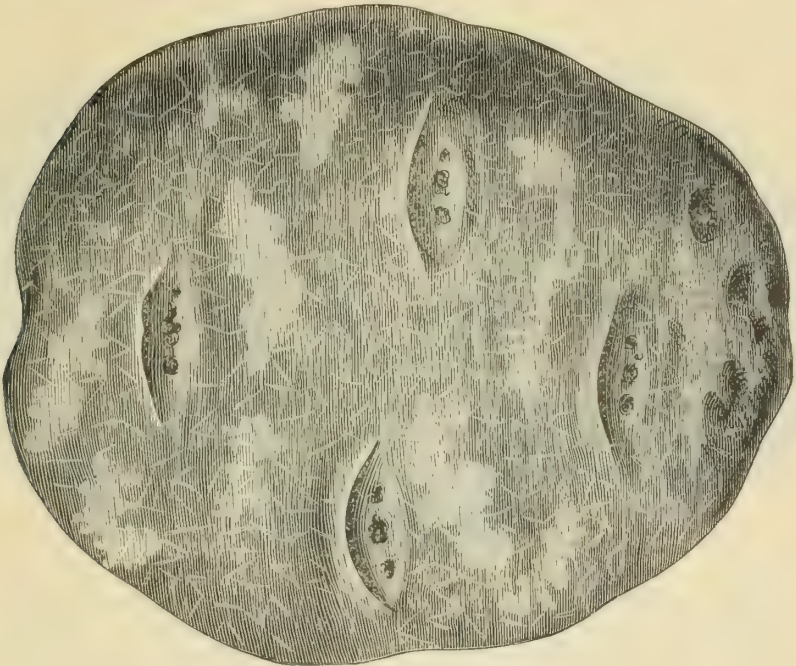
The tubers grow compactly in the hill, are easily harvested. It is an excellent keeper; not inclined to sprout early. Its great beauty, productiveness, and fine quality, will make it one of the best market varieties in cultivation.

Price, 50 cts. per pound; three pounds to one address, \$1.25, by mail, post-paid. At purchaser's expense, \$1.25 per peck; \$3.00 per bush.; \$7.00 per bbl.

BEAUTY OF HEBRON.

This variety was introduced in the spring of 1878. It bears a strong resemblance to the Early Rose, and is said by the originator to mature its crop a week earlier than that variety. The plants appear above ground very shortly after planting, grow rapidly, and on this account withstand better the attacks of the Colorado beetle; skin smooth, slightly tinged with pink around the eyes, but attain a pure white color during the winter; they are very productive, good keepers, of delicate flavor, and for culinary purposes can be highly recommended. It is almost invariably sound, and solid to the core, and will prove a good market variety.

Price, by mail, 50 cts. per lb.; 3 lbs., \$1.25. At purchaser's expense, 75 cts. per peck; bush., \$2.00; bbl., \$5.00.



MANHATTAN.

In this variety we have what may be called an "Improved Compton's Surprise." It combines all the good qualities of that favorite variety, but is much more regular in form, and consequently more desirable as a market variety. In shape it is nearly round, sometimes a little oblong, skin dark purple, occasionally blotched with white; origin unknown; flesh white, very solid, fine grain, cooks through evenly, either in baking or boiling; dry and mealy, and of excellent quality. Size, medium to large, eyes slightly depressed, vines vigorous, a little spreading, of a dark green color; one of the most productive in cultivation. It is an excellent keeper, and can be strongly recommended as a main crop variety.

Price, 60 cents per lb.; 3 lbs., \$1.25, by mail, post-paid; by express, freight paid by the purchaser, \$1.00 per peck; \$2.00 per bushel; \$5.00 per bbl.

EARLY OHIO.

A seedling of the Early Rose, and similar in color, habit of growth, and appearance, with the exception of being a round oblong, while the former is more of an oval oblong, so that side by side it is readily distinguishable. It is several days earlier and more productive, and of very fine quality. It has given general satisfaction wherever it has been tested.

By mail, 60 cents per pound; 2 pounds, \$1.00.

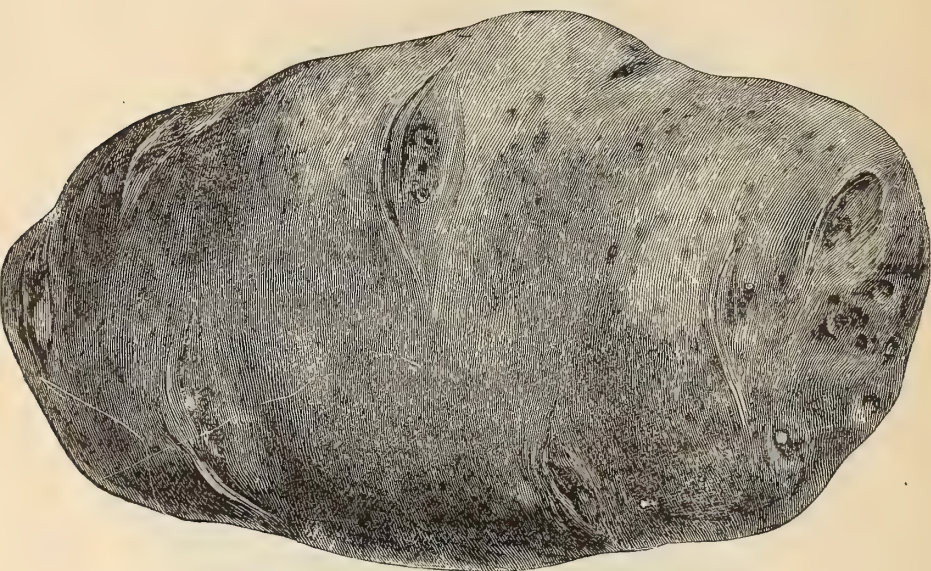
By express or freight, at purchaser's expense, 1 peck, \$1.00; 1 bushel, \$2.50; 1 bbl., \$6.00.

BURBANK'S SEEDLING.

A seedling of the Early Rose, tubers large, long and slim, eyes few and but little depressed; flesh white, fine grain, dry and floury; cooks through readily. It is a second early variety, very productive, and superior for the market, as its size and general appearance are very much in its favor.

By mail, 60 cts. per pound; 2 pounds, \$1.00.

By express or freight, at purchaser's expense, 1 peck, 75 cts.; 1 bushel, \$2.00; 1 bbl., \$5.00.



LATE BEAUTY OF HEBRON.

This new late variety was first discovered in a field of the Early Beauty of Hebron, and stands in the same relation to that variety as the Late Rose and Late Snowflake do to their respective prototypes. It is remarkably productive; tubers oblong and of extra size; skin and flesh white; table properties of the highest order, and keeps well.

Price per peck, 75 cts.; per bushel, \$2.00; per bbl., \$4.50. By mail, 50 cts. per lb.; 3 lbs., \$1.25.

DUNMORE.

This new seedling—a white skinned and white fleshed variety, which originated in Vermont, tested side by side with over forty varieties, in every requisite of a first-class potato, ranks but second to the Burbank. It is superior in its yield, size of the tubers, handsome appearance and fine floury quality either boiled or baked, of the varieties that have recently become famous. As the same potato varies on different soils, possibly on some soils the Dunmore may give greater satisfaction than the Burbank Seedling.

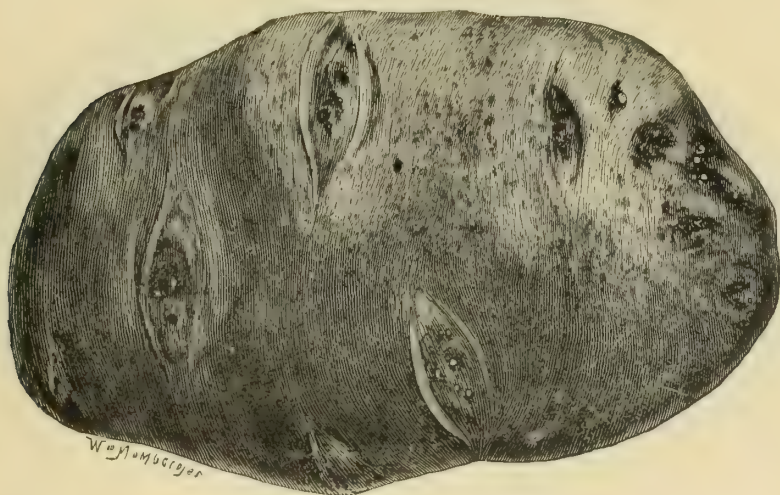
The past season the crop has been remarkably large. Some of the potatoes weighing two pounds each, and were perfect in shape. Its general appearance somewhat resembles the Peerless, but it surpasses that well known variety in both yield and quality.

By mail, 50 cts. per lb.; 3 lbs., \$1.25. By express or freight, at purchaser's expense, 1 peck, 75 cts.; 1 bush., \$2.00; 1 bbl., \$4.50.

ST. PATRICK.

This variety has a smooth white skin, and white flesh, few and shallow eyes; in shape it is rather oblong than round, and has no core or hollow; it is also a strong and hardy grower, and, from all accounts, has withstood the rot so prevalent last season better than any other sort. It produces but few small tubers, ripens medium early, and, finally, it is enormously productive and of fine quality.

75 cts. per peck; \$2.50 per bush.; \$5.00 per bbl. By mail, 50 cts. per lb.; 3 lbs., \$1.25.



ALPHA. (Pringle.)

The Earliest Variety in Cultivation. 1,707 lbs. (28 1-4 bush.) grown from one pound of Seed.

Raised in 1870, from seed borne on Early Rose and impregnated by pollen of Sebec. A very early variety for farm and garden culture, also for forcing under glass; fit for the table ten or fifteen days before the Early Rose. Tubers of medium size, oblong, somewhat flattened, with eyes but slightly depressed; color a clear white, with the slightest tinge of red about the eyes; flesh very white, fine grained, dry and firm, and possessed of a decided and excellent flavor; stalks short and close jointed, seldom exceeding a foot in height; leaf broad, light green and shining above; tubers clustered about the base of the stalk; quality of the highest excellence. A first-class certificate was awarded by the Royal Horticultural Society, of London, in 1874. A silver medal was also awarded by the Massachusetts Horticultural Society. It has been thoroughly tested several seasons in various sections of this country, and has given perfect satisfaction. We can recommend this with the greatest confidence as the very best early variety in cultivation.

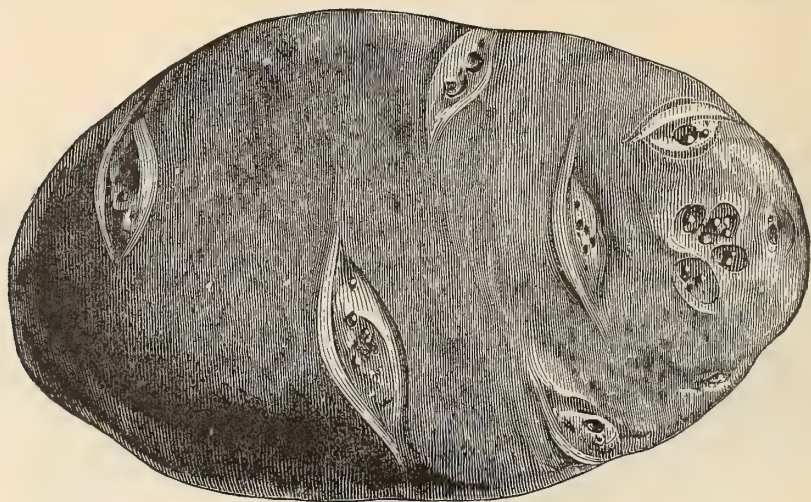
(From the Report of the Royal Horticultural Society of London.)

ALPHA—(B. K. BLISS & SONS.)—Haulm compact, about 12 inches long; ripening off very early, stem pale green, leaflets broad, flat, very pale green; tuber medium size, half round, flat; eyes large, skin smooth, very clear, pale straw-colored; flesh firm, white, of excellent quality for early use. Moderate cropper; one of the very earliest of potatoes. *First-class certificate.*

The committee who awarded the premiums offered by us last Spring, after examining the various communications received from competitors for premiums, report as follows:

"The Alpha has by many growers been declared "much the earliest of any seedlings." It was found to be "fit for use, in sixty days from the day of planting" "of excellent quality when cooked in any way, and gaining steadily in quality and yield." In this latter respect the Alpha differs from most new seedlings. But few improve after the third year, while many deteriorate rapidly. The Alpha, when first brought to notice, was below medium size, and so delicate that it was thought only suitable for garden culture. But gradually we found it increasing in size and productiveness, while it retains its earliness and excellent quality. That it will henceforth rank as the earliest Potato for the field as well as the garden, and that it yields enormous crops, even under ordinary culture, has been sufficiently proved by Mr. Clute's 1,535 pounds, grown without manure whatever." For further information respecting this variety, see the reports of the successful competitors in the following pages.

Per lb., 60 cents; 3 lbs. to one address, \$1.25, by mail, prepaid. By express or freight charges paid by the purchaser, 1 peck, \$1.25; ½ bushel, \$1.75; 1 bushel, \$3.00.



SNOWFLAKE. (Pringle.)

1417 lbs. (23 6-10 bushels) grown from 1 pound Seed.

This superior variety, first introduced by us in 1873, is now admitted by all to be one of the best, if not the best variety in cultivation. The superior quality claimed by the originator, when first offered, has been confirmed in every case as far as heard from.

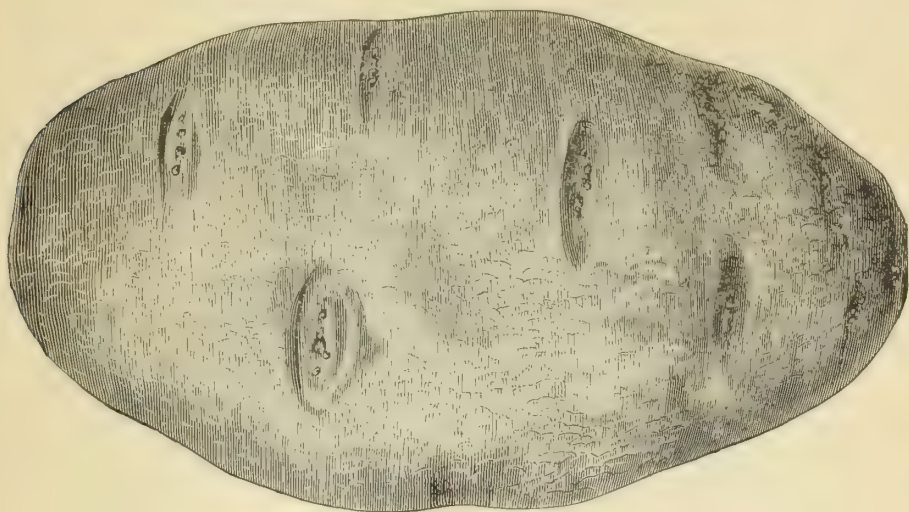
It is one of the earliest varieties, ripening about the same time as the Early Rose. The tubers are of a good medium and uniform size; shape elongated oval, compressed, exceedingly symmetrical and remarkably uniform; eyes few, entirely flat on the base and body of the tuber, and but slightly and sharply depressed near the seed end; skin white with a russety tinge, and somewhat roughish and tessellated. Its flesh is of exceedingly fine grain, snow-white when boiled, and of a lightness and porosity almost approaching a snowflake. In quality, we do not hesitate to say nothing can surpass this new variety; its mealiness, its pure, delicate flavor, and the evenness with which it cooks through, have never been eclipsed by any Potato. As a baking Potato, it is equally valuable, and as such is distinguished for its pure starchy texture and delicate nutty flavor. The tubers have attained the full development of their quality as soon as they are fit to dig, and do not lose it during Winter; samples kept till the first of June did not show the least deterioration. The variety has been tested on widely varying soils—sand, gravel, loam, as well as heavy clay—and has in every case given the same favorable results, and often produced a yield of from 300 to 400 bushels per acre. In every case it has proved healthy and hardy, while other varieties alongside of it failed to give satisfactory results.

We could fill quite a volume with the many letters of commendation that have been received from various growers throughout the country in favor of this fine variety, but for want of room we publish those only which have been received from the successful competitors for the prizes offered by us in 1874. These will be found in the report of the Committee in the last pages of this Catalogue.

We take pleasure in submitting the following extract of that report to our friends, which cannot but satisfy the most incredulous of its superiority.

"The Snowflake has received more and higher praise than has probably ever been bestowed upon any Potato. There is no dissenting voice among the whole list of reports, nearly every one of which contains '*It is the best Potato I ever saw.*' Its quality and uniformity of size are especially commended. In many cases, 25 to 40 perfect Potatoes were found in every hill planted, and 'tubers of two and three pounds each cooked readily and completely through.' Mr. Perkins could select 1000 tubers weighing 1000 pounds from a gross product of 1304 pounds, and finds them preferable to any potato out of over a hundred varieties he grew. Mr. Salter 'never saw so fine a potato; beautiful in color and shape, firm in texture, flesh white; luscious cooked in any way; it stands unrivalled.' There is certainly within our knowledge no variety which combines all the essential points of a Potato in as high a degree as the Snowflake. Quality, shape, size, color, yield, are all that can be desired, and it is difficult to perceive in what direction further improvement can be obtained."

By mail, post-paid, per pound, 60 cts.; three pounds, \$1.25. By express or freight, charges paid by the purchaser, 1 peck, \$1.00; half bushel, \$1.25; 1 bushel, \$2.25; 1 barrel, \$5.00.



EXTRA EARLY VERMONT.

The superior merits of this variety, first sent out by us in the Spring of 1872, may now be considered as fully established. It has been largely cultivated over every section of the country, the past nine years, and fully sustains the high character given it by the committee for awarding the premium offered by us in 1873, in the following statement, after examining the reports of the various competitors:

"**The Early Vermont**, as proved by the numerous reports before us, more than sustained its previous reputation. *Nearly all the competitors declare it from one to two weeks earlier than the Early Rose, and many even more.* Its uniform and large size is recognized by every one. Mr. McLeod says: 'There are more than 100 in the amount I raised that would weigh from one to two pounds each;' and Mr. Salter raised one tuber that weighed **THREE POUNDS TWELVE OUNCES**. Its superior cooking and eating qualities are unanimously commended, as well as its compact growth in the hill and its freedom from disease, and with the thousands of cultivators who have grown it alongside the Early Rose, there seems to be no doubt left that in *quality, hardiness, earliness and yield, it far surpasses that celebrated variety.*"

A first-class certificate was awarded this variety by the Royal Horticultural Society of London, 1873.

Caution.—In consequence of the great similarity between the **Extra Early Vermont** and the **Early Rose**, many of the latter will doubtless be offered by unprincipled persons as the **Early Vermont**. To avoid imposition, we caution purchasers to beware of itinerant peddlers, and purchase their stock of reliable parties only. We employ no peddlers or agents. Address all orders directly to our house.

PRICE:—By mail, postpaid, one pound, 50 cents; three pounds, \$1.25. By express or freight, charges paid by purchaser, 1 peck, \$0.75; $\frac{1}{2}$ bushel, \$1.25; 1 bushel, \$2.25; 1 barrel, \$5.00.

BLUNT'S WHITE PROLIFIC FIELD CORN.

This is an eight-rowed white flint corn, with short, well-shaped ears, and small cobs. The stalks bear from 3 to 8 ears; the ears are uniform in size, from end to end, averaging 8 to 9 inches in length, and the kernels are hard, well-shaped, and compactly placed on the cob. Like other flint varieties it matures early. Mr. Henry Stewart, one of the editors of the *American Agriculturist*, says that it yielded at the rate of 150 bushels per acre, on an experimental plot, at his farm in New Jersey. In the *Country Gentleman*, Mr. Blunt says, "The average number of ears to the stalk is six good sized ears, and fourteen the largest number on any one stalk. I selected 100 stalks that made a little over three bushels of shelled corn." *Prices by mail, per pkt., 10 cts.; 1 lb., 30 cts.; 4 lbs., \$1.00. By freight or express, per peck, \$1.00; half bush., \$1.75; 1 bush., \$3.00; 2 bush., \$5.50.*



POTATOES—EXTRA EARLY VERMONT.—Showing Habit of growth in the Hill.

STANDARD VARIETIES.

Three pounds of either of the following varieties will be mailed, post-paid, to any address in the United States, upon receipt of \$1.25, or one pound for 50 cents.

Not less than one pound, or more than one variety in one package, will be mailed.

Early Rose.—This was the first of Mr. Bresee's Seedlings, offered by us in January, 1868, and has now become the standard variety for earliness, quality, and productiveness. *Per peck, 75 cents; bush., \$2.00; bbl. \$4.00.*

The Belle.—Introduced in 1880. Skin of light red color and slightly netted or covered with russet. Very smooth and beautiful in form and proportions, with eyes but slightly depressed. Extra large in size, but never hollow or prongy. Unsurpassed in cooking qualities, fairly eclipsing the old Peachblow. Grows a strong, heavy, upright, branching stock, with dark-green foliage. Blossoms freely, and makes a fine appearance while growing, and this year was one of the best yielding sorts. Price per pound, 50 cents; three pounds, \$1.25; by freight or express, peck, \$1.00; bushel, \$2.50; barrel, \$6.00.

Late Rose.—This variety, first offered by us in the Fall of 1871, has been largely cultivated in various parts of the country, and has given universal satisfaction. It ripens two or three weeks later than the Early Rose, and has proved to be much more productive, harder, healthier, and a better keeper, retaining its good quality till new potatoes come in. *Per peck, 75 cents; bush., \$2.00; bbl., \$4.00.*

Peerless (Bresee's No. 6).—Skin dull white, occasionally russeted; eyes shallow; oblong; flesh white, mealy, grows to a large size, often weighing from one and a half to two pounds, and enormously productive, frequently producing from 100 to 150 barrels to the acre. Its great beauty, superior quality, and enormous productiveness place it among the best varieties for general culture. *Per peck, 75 cents; bush., \$2.00; bbl., \$4.00.*

White Peachblow.—A seedling of the old Peachblow. Very late; medium to large; round; skin white, with bright, pink eyes; flesh white; cooks very dry and mealy. This variety has for years been the principal market potato in New-York, and has proved a remunerative crop to the producers. *Per peck, 75 cents; bush., \$2.75; bbl., \$5.50.*

Chicago Market.—One of the best, either for family use or market. The tubers are large and uniform in size, grow compact in the hill, eyes shallow and few in number. Flesh dry and well-flavored; it is wonderfully productive, and succeeds well in all soils so far as we can learn. Have grown it five years with the greatest satisfaction. The skin is light flesh color, but partially covered with a russety coating; flesh white. *Peck, \$1.00; bush., \$2.50; bbl., \$6.00.*

Any other varieties not in our list will be furnished at lowest market prices.

THE GREAT CENTENNIAL EXHIBIT

OF

500 Named Varieties of Potatoes.

The Largest Collection of Potatoes in the World, for which was Awarded

THE GRAND CENTENNIAL PRIZE MEDAL AND DIPLOMA!

Acme.	Cascoe.	Early Ohio.
Adirondack.	Cayuga.	" Peachblow.
Agawam.	Central City.	" Pearson.
Alaska Blue.	Centennial.	" Pinkeye.
Alexandra.	Charlotte.	" Prince.
Alpha.	Chenery.	" Purple.
Amazon.	Chili No. II.	" Queen.
American Breadfruit.	Climax.	" Racehorse.
Anderson.	Cluster.	" Rose.
Andes.	Colebrook.	" Russet.
Angola.	Collum's Seedling.	" Samaritan.
Armonk.	Columbus.	" Scotch Cottage.
Ashleaf Fluke.	Colorado.	" Shaw.
Ashleaf Kidney.	Colorado I.	" Snowball.
Ashtop Fluke.	Colorado II.	" Sovereign.
Badger.	Compton.	" Stevens.
Baldwin.	Compton's Surprise.	" Victor.
Banks.	Con.	" Wendell.
Beauty.	Concord.	" White.
Beauty of Hebron.	Conn. Blue.	" York.
Bellaire.	Conover.	East Branch.
Ben. Merritt.	Cornell's Kid.	Eclipse.
Berkshire.	Cowhorn.	Egg.
Black Diamond.	Cracker.	Elder.
Black Mercer.	Cullock.	Empire.
Black Prince.	Cuzco.	Empire State.
Bliss Triumph.	Dagger.	Eng. Rose.
Blue Kidney.	Davenport Seedling.	Eureka.
Blue Western.	Davis Seedling.	Excelsior.
Blush.	Delmahoy.	Extra Early Vermont.
Bradford Seedling.	Dickinson's Saybrook.	Early Rose Seedling.
Breakfast.	Dover.	" Ohio.
Bresee's Prolific.	Dover Seedling.	" White.
Brown.	Dr. Bretonneau.	Fancy Red.
Brownell's Beauty.	Dr. White.	Field crop.
Brownell's Success.	Duke of Cumberland.	Findlay.
Brownell's Superior.	Dunmore.	Fisher.
Bucyrus.	Dykeman.	Fluke.
Bulkeley's Seedling.	Early Blue.	Forest Rose.
Burbank.	" Cottage.	Forfarshire Red.
Busam's Early.	" Don.	Foster's Late Rose.
Busam's Late Prime.	" Durham.	Fox Seedling.
Calico.	" Golden.	Freeman.
California.	" Goodrich.	Fremont.
California (purple).	" Handsworth.	French.
California Mercer.	" Indiana.	Galva.
Callao.	" June.	Gardner.
Campbell's Late Rose.	" Kidney.	Garnet Chili.
Carpenter.	" Lilac.	Gem.
Carter.	" Manly.	Gen. Grant.
Carter's Early Forcing.	" Mohawk.	Genesee Co. King.

German Russet	Manhattan.	Prairie Flower.
Giant.	Mansfield.	President.
Gilman.	Marchioness of Lorne.	Prince Arthur.
Gleason.	Massachusetts White.	Prince of Wales.
Globe.	Mammoth Pearl.	Purple Blush.
Golden Gem.	Massasoit.	" Mercer.
Granite State.	Matchless.	" Peerless.
Gray Russet.	Merino.	Quadroon.
Great Britain.	Methodist.	Queen of the Earlies.
Great Western.	Mexican.	Queen of the West.
Greenfield.	Michigan Red.	Quinby's Seedling.
Guernsey.	Miller.	Rand's New Peachblow.
Hamburg.	Miller's Seedling.	Raspberry-Leaved.
Harison.	Minnesota Seedling.	Red Climax.
Harlequin.	Missouri White.	" Gem.
Hemlock.	Monas Pride.	" Jacket.
Hero.	Monon.	" Kidney.
Hickory.	Motley.	" Neshannock.
Hinman.	Mountain Blue.	" Orange.
Holly Hock.	Nanuet.	" Peachblow.
Holmes.	Napoleon.	" Streak.
Hoosier.	New Hartford.	" Ulink.
Hugh.	New Kidney.	Ridgefield Seedling.
Huntington Seedling.	Noblow.	Rochester Seedling.
H. Ward.	Nonesuch.	Rose Bud.
Hyde's Seedling.	Noyes.	Rose of the West.
Ice Cream.	Niggerhead.	Rose Seedling.
Improved Ashleaf Kidney.	Niggertoe.	Rough and Ready.
Improved Gem.	Ohio Beauty.	Round White.
Irish American.	" Chenango.	Roxbury.
" Blue.	" Mercer.	Royal Ashleaf Kidney.
" Cup.	" Red.	Ruby.
" Orange.	" Russet.	Sandy Brown.
Jackson White.	Old Fleshcolored.	Saranac.
Jenny Lind.	" Kidney.	Scotch Blue.
John Bright.	" White.	" White.
Jones Seedling.	Oneida.	Sebec.
Jug.	Orange Peel.	Seedling Cusco.
Kansas.	Orono.	" Mercer.
Kearsarge.	Oscar.	" Peachblow.
Keystone State.	Pale-Blush Pinkeye.	" Prolific.
King of Jacksons.	Palmer.	" Rock.
King of Potatoes.	Palmyra.	Sharon.
King of Sweden.	Paragon.	Shaker's Fancy.
King of the Earlies.	Patterson's Albert.	" Russet.
King's Seedling.	" Blue.	Shaw.
Kruger.	" Early White.	Sheridan.
Lackawanna.	" Golden Don.	Sherwood.
Lady Finger.	" Regent.	Silverskin.
Laing's Seedling	Patoka.	Skerry Blue.
Large Seedling.	Peachblossom.	Smith's New Seedling.
Lapstone Kidney.	Pearl.	Snapdragon.
Late Pinkeye.	Peerless.	Snowball.
Late Rose.	Penn. Searchwarrant.	Snowflake Early.
Ledding's Seedling.	Philadelphia.	Snowflake Late.
Little Gem.	Philbrick's Early White.	Soisoto.
London White.	Pigeon Eye.	South Bend.
Long Pond.	Pinkeye Rustycoat.	Starch.
Magnum Bonum.	Pinkeye Strawberry.	Startler.
Mahopac Seedling.	Platt's Seedling.	State of Maine.
Maiden's Blush.	Plymouth Rock.	Stevens.

A New Early Sweet Potato.

EARLY GOLDEN.

This variety originated in Virginia a few years since, with an old cultivator of the Sweet Potato. It is a sport of the old **Early Red**, but said to be far superior to that variety in earliness, productiveness, color, and quality. Slips planted May 10th produced tubers large enough for the market July 25th. On account of its early maturity, it is believed to be better adapted for cultivation in the Northern States than any other variety. In shape they are somewhat shorter than the ordinary varieties, of a golden-yellow color, cook very dry, and are of superior flavor. Another valuable consideration in favor of this variety is that they will grow on quite ordinary soil, with but a slight coat of manure, and yielded a large crop the past season upon land that would not grow above fifteen bushels of corn to the acre. In good soil they will produce many specimens weighing three to five pounds each. It is also an excellent keeper. From what we can learn from those who have tested this variety, we think it will prove the most valuable in cultivation.

We first offered this variety in spring of 1880, and have received many favorable notices from those who have tested it. It matured its crop as far north as Canada. Specimens have been exhibited weighing six pounds. Slips ready about May 15; tubers, early in April.

Price of slips, with directions for planting, by mail, post-paid, 50 cts. per dozen; \$1.00 for fifty; \$1.75 per hundred. By express, at purchaser's expense, \$1.25 per hundred; \$10.00 per thousand.

Price of Tubers, 60 cts. per pound; 3 lbs., \$1.25, by mail. By express, at purchaser's expense, 5 lbs., \$1.00; 20 lbs., \$2.50; 50 lbs., \$5.00.

Different Methods of Propagating.

The usual method is to place the potatoes in a hot-bed, and cover them with a few inches of fine soil; the buds will soon start and form shoots; these, as they grow, make roots of their own, and when they are eight inches to a foot long, and well rooted, the most forward ones are removed, and the others not yet large enough are allowed to grow on. It is customary to split the larger potatoes lengthwise, and lay them flatside down in the bed. After the shoots appear, they should have the same care as other hot-bed plants, to prevent them growing weak and drawn up. These shoots, known in the Southern States as "draws" and "slips," are at the North called "sets" and "plants." Do not set the plants until settled warm weather; then set them well down to the first leaf, fifteen inches apart in the ridge. There will be below the leaf some joints without leaves. Should a frost nip the top, then a new shoot will start from one of the barren joints. The sides of the ridges, and the spaces between them, must be kept clear of weeds until the vines cover the ground; move the vines once a week or so at the North to prevent them from taking root; this is quickly done by means of a rake-handle or other stick. Do not break or cut the vines. At the South the season is long enough to let them take root at the joints, as they will make potatoes then, but at the North we wish to prevent their taking root, and to throw all the strength of the vines into the potatoes that form on the original plant. Be careful, in working among the plants, not to hoe too deeply, as the earliest potatoes lie immediately beneath the surface. Upon digging the potatoes, they should be carefully handled, and put away in boxes or barrels with alternate layers of leaves or cut straw, in a warm, dry place to keep.

The Land and How to Cultivate Them.

The sweet potato may be cultivated on any soil but a heavy one. We have seen fine crops on white sand that would blow into drifts with every heavy wind. A large grower says that he has never seen a sand-hill so poor but what, with judicious manuring, it would bring a good crop; and that any soil which will produce a fair crop of corn will produce one of sweet potatoes, provided it is a sandy loam. He says that he has known a crop in his county of 800 bushels of sweet potatoes to the acre, upon land that would yield 50 bushels of corn, and was fertilized with 400 lbs. of Peruvian Guano to the acre. The manure should be placed on the surface, and the ridges turned upon it from 3½ to 4 feet from center to center. Plant the slips on the top of the ridges as above recommended.

In addition to the above, we offer the Nansemond and Southern Queen varieties.

Prices of Sweet Potato Plants delivered in May or June.

Nansemond.—25 cents per dozen; 75 cents per hundred, by mail; 50 cents per hundred; \$4.00 per thousand, packed, by express.

Southern Queen.—25 cents per dozen; 75 cents per hundred, by mail; 50 cents per hundred; \$5.00 per thousand, by express.

Sweet Potato slips, sent either by mail or express, will be packed with all possible care; but, as delays sometimes occur while on the route, we cannot be responsible for the condition in which they reach the purchaser, nor can we make any allowances for losses that may occur. We do not recommend sending by mail when the plants will be more than forty-eight hours on the way.

Report of Committee

For awarding PREMIUMS offered by B. K. BLISS & SONS to growers of the largest quantity of POTATOES, from One Pound of Seed.

...

After becoming fully satisfied of the superiority of the new varieties of Potatoes, introduced by us during the past ten years, we have offered, from year to year, premiums to those who should grow the largest quantity from one pound of seed, of the different varieties with ordinary farm culture, and have paid out within that time upwards of **Three Thousand Dollars** to the successful competitors. The premiums offered for each variety were as follows:

\$250.00 in Premiums.

For the largest quantity of Potatoes grown from one pound of seed, - - - -	\$100 00
For the second largest, - - - -	50 00
For the third largest, - - - -	40 00
For the fourth largest, - - - -	30 00
For the fifth largest, - - - -	20 00
For the sixth largest, - - - -	10 00

Competitors for the prizes were required to give the date on which they gave their order for the potatoes, date of planting, date of digging, with a written statement of their mode of culture, characteristics of the soil—whether clay, alluvial, sandy or loam—nature of the subsoil, whether underdrained or not; also the kind and quantity of fertilizers used, how and when applied, the number of hills, and distance apart each way, with the weight of the crop when dug, and the number of square feet occupied by the crop, which must be witnessed and sworn to before a justice of the peace, notary, or any other one competent to administer the oath.

The awards were made by a committee composed of the following well-known gentlemen in the agricultural community: PROF. GEORGE THURBER, editor American Agriculturist, DR. F. M. HEXAMER, and P. T. QUINN, Horticulturists. They were published in the leading Agricultural Papers, and a copy mailed to each competitor. The prizes were awarded the first of January, of each year.

N. B.—To prevent misunderstanding, we wished it distinctly understood that no prizes would be awarded unless the above requirements were complied with in every particular. Competitors for premiums were placed under no restrictions, as to their mode of culture, excepting that *they must not be grown from slips or forced by artificial heat*, our object being to ascertain their respective merits with such culture as is usually given to crops in a well-managed vegetable garden or farm.

REPORT.

The number of competitors, who, tempted by these liberal prizes, tried their skill and industry in producing a premium crop, was naturally very large. Thousands of reports—representing every Potato-producing State and Territory of the United States, and even many Foreign Countries—nearly all from practical farmers, and many from men who have made Potato-growing their life's work, and may well be called the Champion Potato growers of the world. The practical information embodied in these Reports must naturally be of great value to every tiller of the soil, and at the request of the committee I have endeavored to condense the leading features of the modes and conditions under which these immense crops were grown.

YIELD FROM ONE POUND OF

Compton's Surprise in 1873.	Early Vermont in 1873.	Early Vermont in 1874.	Compton's Surprise in 1874.	Brownell's Beauty in 1874.	Snowflake in 1875.	Eureka in 1875.	Alpha in 1876.	Ruby in 1876.
511	607	708	900	1,018	1,417	1,666	1,707	1,982
450	437	698	874	811	1,304	1,403	1,665	1,694
390	398	690	832	782	1,125	1,149	1,535	1,576
386	380	674	811	749	1,090	1,145	1,511	1,571
		629	684	720	1,089	1,087	1,426	1,534
		615	588	696	1,069	1,066	1,280	1,353

The gradual increase in the yield, from year to year, is at once apparent, and when we consider that several of the largest yields in 1876, were grown by the same persons to whom the highest awards were given at the first trial, and when we consider that this increase in the yield is not due to the greater productiveness of the newer varieties, but solely to the increasing skill of the competitors, and the better management given their crops, we are forced to appreciate the great amount of good which these competitive trials have produced. I am aware that the largest yield from one pound is not always in proportion to the largest yield per acre; nor do these immense yields, produced by the lavish application of manures, regardless of expense, give a criterion of the profits of the crops, after deducting the premiums. Many growers who have produced less than one thousand pounds from one, may have obtained larger profits per acre, than the successful competitors yet no one who has grown a thousand, or even five hundred pounds from one, can have done so without learning something which will be of value to him in growing Potatoes as a field crop, nor can any one read an intelligent report of his methods of cultivation, without benefit.

Soil.—Many of the premium crops were grown on new lands, and on soil of almost unequalled quality. The largest yield was produced on "a mixture of sand and clay, very rich in vegetable matter to the depth of *eighteen feet*, and underlying this is a gravelly subsoil. For three years the ground was used as a stock-yard, the straw being left on the ground to rot and be burned." The second largest product, was grown "on a very rich, sandy loam, rich in decayed vegetable matter to the depth of between two and three feet, and lying upon a compact formation known as hard-pan, which has never been underdrained." Another competitor describes his soil as "black loam, four feet deep, on the bank of a creek, and it has been used as a cattle-yard for ten years." Another, "as vegetable mould and sandy loam, three feet deep, never cultivated before." Most crops however, were raised on deep, alluvial lands, underlaid with gravel; others on light loam with clay or gravelly subsoil, and in a few cases on heavy clay highly manured. In but very few instances was the land artificially underdrained, which seems to be a noteworthy fact, as most writers consider drained soil indispensable for the production of good crops.

Manures.—The large quantities of Fertilizers used by most competitors is something astonishing, and may well serve to disprove the general belief that heavy manuring is injurious to potatoes. Mr. Pearson added to an already very rich soil, about 60 two-horse loads of manure, nearly 200 bushels of wood-ashes, and 24 bushels of lime, per acre, together with bone-dust and other fertilizers in smaller quantities. Mr. Rose, after covering his land three inches thick with rotten barn-yard manure, and three bushels of wood-ashes per square rod, applied in addition, a large shovelful of rotted hen manure, and two handfals of ashes to each hill, besides several surface dressings with other fertilizers. But all this must appear but a small attempt at enriching the land, to our Scotch friend, Mr. Robertson, who would not entrust his seed to a black sandy loam, four feet deep, underdrained and trenched, to probably the entire depth, before spading under a coat of *five inches* of well rotten cow-dung, and applying afterwards to the hills three cart-loads of wood-ashes, two of sheep droppings, and several other fertilizers.

About the value of wood ashes, and especially in mixture with hen manure and plaster, there seems to be no doubt left; they were used by a large majority and may be considered the Special Potato Fertilizer. Even when applied in very large quantities they have produced no injurious effect. In a few cases, as much as one pint of ashes has been applied to each hill as top-dressing, and in one instance the sets were actually planted in and covered with ashes. Plaster, lime and salt have likewise been extensively used and with great advantage. Strong nitrogenous manures have generally been considered as detrimental to the potato, but here we find that many successful growers have used large quantities of Blood, Fish and Peruvian Guano; hen manure as well as barn-yard manure, at the rate of fifty loads per acre, to the greatest advantage and without producing diseased potatoes.

Planting.—The time of planting in nearly all cases was between the 10th and 26th of May, and in the majority of these before the 15th. That single eyes and eyelets will, with good care, produce large crops, has been sufficiently proved. All the large yields were grown from very small sets. In some cases, single eyes were divided into ten pieces, and in one instance two hundred and ninety (290) sets were made from one pound, nearly all of which grew well. The sets, with few exceptions, were planted singly, yet we find a product of nine hundred and seventy (970) pounds raised from fifty-two (52) hills, two sets to each, nearly nineteen (19) pounds per hill, and six hundred and seventy-seven (677) bushels per acre. Whether this large yield is due only to the very favorable soil they grew in—a rich black loam, formerly used as a hog yard—and the immense quantities of ashes applied in the hills and as top-dressing—one peck to the hill—or to the two-set system, does not appear. It is to be regretted that a part of the plat was not planted with one set to the hill, and the products weighed separately. These practical tests, of the feasibility of raising large crops from small sets, become of much importance in seasons of scarcity of seed

potatoes. For it is shown here that, even without carrying the division of the eyes to extremes, nine-tenths of the seed may be saved.

A comparison of the distances between the hills with the average yield per acre gives a most interesting and valuable table, as follows:

The sets planted at a distance of

2 x 3 feet gave a yield of 378 bushels per acre.	3 x 4 feet gave a yield of 372 bushels per acre.
2 x 4 " " " 462 " "	3½ x 4 " " " 342 " "
3 x 3 " " " 651 " "	4 x 4 " " " 332 " "
3 x 3½ " " " 441 " "	4 x 8 " " " 88 " "

The large number of data of which the above figures form an average, give these statistics a special value. It will be seen that although the greatest yields from one pound grew from hills four feet apart, the largest crops per acre were raised at distances of three feet each way, and that as the distances between the hills are increased or decreased, the yield diminishes in regular proportion. In the first case, there remains wasted ground which is not reached by the roots of the plants, and in the latter, the roots are so crowded that they cannot obtain all the nourishment they are capable of consuming.

Cultivation.—It will be hardly necessary to state that in many cases the cultivation and care these growing potatoes received were unremitting and indefatigable. In no case were weeds to be seen in the patch; some of the plantations received semi-weekly hoeings, and all were kept scrupulously clean, and the soil loose and mellow. Yet many large crops were grown with but ordinary care. Mr. J. I. Salter swears "that the cultivation, manuring, etc., was the same he has given his general crop of potatoes for the last five years, and in no respect had there been extra care and labor bestowed." Mr. H. C. Pearson certifies "that these potatoes were grown with the most ordinary farm culture, being hoed only twice and receiving no extra treatment in any respect."

The mode of planting and cultivating with a larger number of the best cultivators consists in crossing their fields with furrows six and more inches deep. The sets are dropped at the crossings and immediately covered with about two inches of soil or compost. The vines as they grow are hilled up gradually and frequently to a final height of twelve to eighteen inches. Then large, broad hills are made, using all the soil between the rows.

Irrigation.—The fact that the largest yields were produced in the Eastern States, in regions which suffered from one of the severest droughts known, where the general crops failed almost entirely, induced us to investigate more closely the manner in which these premium potatoes were grown. As the result we find that all these competitors attribute their success to the judicious application of water during the dry season. One of the competitors had arranged an ingenious system of irrigation, by inserting six inches from each hill, two inch drain tiles, six inches deep, and filling these with water, twice a week, during the dry weather. In reply to a letter he writes: "I attribute my success the past season to the fertilizers applied, but more especially to the mode of applying water. I find that, even without manure, this plan gives great results. Give me drouth and this means of applying water, and I can grow a much larger crop than with the most favorable weather and no watering. This I have proved by two years' experience." Many may not be so situated that they can apply as complete a system of irrigation, but thousands of farmers have running through their lands, brooks and streams which might, without much cost, be made to furnish nutriment to their parching crops. One acre of potatoes would in many cases pay for more than the entire expense of a permanent system of irrigation. The information about this important subject, derived from the accompanying reports, cannot but prove of the greatest value to all cultivators of the soil.

Although these short extracts, from material sufficient for a large volume, can do but little justice to the importance of the subject, yet they may serve as an outline of the important and valuable information which could in no other way be obtained.

Trusting that the increasing interest in potato culture, stimulated largely by these competitive trials, may be still more productive of information and progress in this important branch of Agriculture,

I am yours respectfully,

F. M. HEXAMER, *Secretary.*

Extracts from the Report of Mr. Nardy, delegate from the French Government to the Centennial Exhibition at Philadelphia in 1876.

"The collection exhibited by the house of Messrs. B. K. Bliss & Sons of New York, is the most remarkable of its kind in the Exposition. The varieties of Potatoes in their exhibit, and the evident care and attention bestowed upon their collection, manifest constant study on the part of the exhibitors. In our opinion theirs was the most complete display of this valuable esca-

lent in the exhibition. To this remark we desire to add a few observations. We sincerely hope that the influence of this horticultural exhibition at Philadelphia will long be beneficially felt among farmers and growers of plants and vegetables. That were in reality all the fruits and vegetables which we to-day enjoy, when Asia, Africa and America sent them to us in their wild state? unfit for eating! Now, after having been cultivated and improved by the gardeners, they have become succulent and nourishing, and pleasant to the taste. By patience and careful cultivation, horticulture has been enabled to transform the type of many species of vegetation into a great number of varieties. Let me take as an example of this, the collection of Potatoes exhibited by these gentlemen which consists of 500 varieties, and we can thus appreciate the patience and researches which must have been necessary to obtain so many useful varieties. The service rendered to the farmers of the United States by the house of B. K. Bliss & Sons is so evident, that we do not hesitate to call attention to them, for agriculture in general derives an immense benefit from these great improvements in useful vegetables, which are mainly due to their initiative. The cultivation of the Potato takes an important rank in the agricultural productions of this country. As a source of revenue, it comes immediately after grain and before tobacco. It is now many years since the senior partner, having a special aptitude for horticulture, devoted himself to that study. In 1845 he founded his first establishment, and year by year, by steady application, and especially by his energy in collecting the rarest seeds and best varieties of useful vegetables from all countries, the reputation of the house constantly increased. He was the first to introduce the Early Rose Potato, which he did in 1867, and his establishment then acquired the important position which it now enjoys. Animated by the spirit of the amateur he has not only sought out varieties in this product, but has endeavored in every way to render a benefit to agriculture by inducing the farmer to improve the cultivation of this esculent.

But if we were to dwell longer on this question, we should be carried too far from our object, which is to call the attention of our French Government to the importance of this house who were so highly distinguished by the jury at Philadelphia, and close this report by expressing our desire that they will send some of their rare specimens to our Paris Exhibition of 1878."

Reports of Three of the Successful Competitors

FOR THE PREMIUMS OFFERED BY US IN 1876.

How to Grow Twenty Bushels and Upwards of Potatoes from One Pound of the Seed.

The following reports have been properly witnessed and sworn to before a Justice of the Peace—in their respective residences—they have also been carefully examined by the committee and found to conform to the rules prescribed in our offer for the Premiums.

(From H. C. Pearson.)

PITCAIRN, N. Y. October 4, 1876.

MESSRS. B. K. BLISS & SONS:—I ordered of you April 1st, 1876, one pound each of **Ruby** and **Alpha** Potatoes, and planted them May 10th, 1876, and dug them September 28th. The **Ruby** produced **1,982 pounds** and the **Alpha** produced **1,707 3-4 pounds**. The soil was light loam with some gravel with a sand and gravel subsoil not underdrained. The soil was very rich, and its fertility was increased in the Fall of 1875, by spreading broadcast fifty-two horse loads of well rotted manure, three years old, and 150 bushels of ashes per acre, and plowed it under about eight inches deep; plowed and harrowed until perfectly pulverized eight inches deep last May. Placed in each hill before planting, two quarts of compost, composed of thirty bushels of decayed manure, five bushels of ashes, three bushels slacked lime, eight quarts salt, and four pounds of sulphur; the tubers were cut, some of the eyes divided into as many as seven and eight parts, planted one set in each hill, and covered them about three inches deep with soil mixed with some bone dust, making in all 195 hills of the **Ruby**, 210 of the **Alpha**; they were planted three and one-half feet apart each way, the number of square feet occupied by **Ruby**, was 2,364 feet, the number occupied by **Alpha**, was 2,546 feet. I hoed them three times, making very high, broad hills, watered them several times during July and August, with liquid manure, dug from one hill of **Rubys**, forty-three potatoes, weight **17 1-2 pounds**; used no slips or artificial heat. H. C. PEARSON.

(From J. I. Salter.)

ST. CLOUD, MINN., October 24, 1876.

MESSRS. B. K. BLISS & SONS—Sirs:—On the 7th of April, 1876, I ordered of you, one pound each of the "**Ruby**" and "**Alpha**" Potatoes. Planted the **Ruby** on the 31st day of May. Prepared the ground as follows: I spread as evenly as I could on the sward, about equal parts of hen and barn-yard manure, at the rate of five heaping garden wheelbarrowfuls to the square rod.

before plowing, then plowed, turning a furrow ten inches deep and ten inches wide. I then planted my sets, after dividing every cluster of eyes into from three to twelve pieces, in rows four feet apart and as near as convenient, three and one-half feet apart in the rows, dropping but one piece in a place. I covered from two to three or four inches with loose earth. From the pound I made two hundred and ninety (290) sets, the space planted was sixty by seventy feet, (4,200 square feet); hoed but once, when the plants were about ten inches high, making a broad and continuous ridge, flat on the top, and a little depressed in the center; covered the vines all but a very little of the top. Before hoeing, I applied to each plant a large shovelful of fermenting hen manure; it was so hot that it would turn the leaves of plants black, and give them the appearance of being scalded, in less than a minute; I would manure three or four plants, and then cover as quickly as possible. The plants, in a day or two, began to grow and retained a dark green, almost black color until they were killed by the frost. I did nothing more in the way of cultivation.

On the 19th of August, I dug one hill of the "Ruby," and had ten and one-half (10½) pounds; on the 9th of October, I dug of the **Ruby** eight hundred and twelve (812) pounds; on the 10th of October, I finished digging the **Ruby**, digging eight hundred and seventy-one and one-half (871½) pounds, making a total of sixteen hundred and ninety-four (1,694) pounds. The "**Alpha**" was planted the same distance apart each way, had the same cultivation, manuring, etc., as the **Ruby**, except about fifty hills, that I covered the sets about four inches deep with coarse, unfermented horse manure, and applied no other manure afterward. I covered this manure with earth, the same as I covered the hen manure. I did not get as many large potatoes from these so treated, but about the same in weight per hill; made two hundred and fifty sets. The ground occupied by the **Alpha** was the same as the **Ruby**, sixty feet by seventy (4,200 square feet). I also planted two rows of this Potato in hills four feet apart each way. The land in both cases, a black sandy loam, rich in decomposed vegetable matter, usually about two feet deep, under which is hard pan. On the 28th of August, I dug two hills of the **Alpha**, and had 15 3-4 pounds; on the 12th of October, I dug 1,010 pounds of the **Alpha**, and on the 13th of October, 640 pounds, making altogether 1,665 3 4 pounds.

These amounts I dug, were grown alone from the one pound each of the above named varieties, purchased from you as I stated above, and without any sprouting or any other means being used than as stated. The land was not drained in any way.

J. I. SALTER.

(From Peter Robertson.)

THE GARDENS—HARTTRIGG HOUSE, JEDBURGH,

ROXBOROUGH, SCOTLAND, October 4, 1876.

Messrs. B. K. BLISS & SONS:—Gentlemen. I beg to forward to you my report. I ordered of you, March 21, 1876, one pound each of **Alpha** and **Ruby** Potatoes. I planted them on April 24, 1876; they were dug October 2 and 3, 1876. The **Ruby** produced 1,534 pounds, and the **Alpha** produced 1,246 pounds. The soil is a mixture of black, sandy loam, four feet deep, with a red clay subsoil and underdrained; it has been lawns or short grass for many years; it was trenched on or about December, 1875, and remained in Winter fur until about April 10, 1876, it was enriched by about five inches of well-rotted cow dung and gas lime rubbish; the ground was then dug in the usual way, care being taken to mix and make it as fine as possible; the rows were six feet apart, and the sets were planted three feet apart, a mixture of about three cart-loads of wood-ashes, two cart-loads of sheep droppings, one lime, two hundred weight salt, all mixed. The tubers were cut and planted in the presence of Mr. Kerr and others. Some of the eyes divided into seven parts; they were very small. Planted one set three feet apart each way; under each, three spadefuls of the above mixture was pulverized three inches deep with the soil, and each set planted one inch deep; they all grew; at first they looked very weak, but gained strength something extraordinary; they were kept free of weeds, and the soil drawn to them as they grew; they were two inches high on May 29, 1876; they got nothing but kept free of weeds, and the soil drawn to them as they grew, until the tubers began to swell; they were then watered with a mixture of sheep droppings and hen manure a few times until they were lifted; there were 176 sets of **Ruby**, 164 **Alpha**, single eyes and very small; from one set single eye I had twenty-one pounds; many of the tubers were two and three pounds each. I may also say that I had some very fine, early Cauli-flowers and Early Cabbage on the same ground; they were planted between the rows of the Potatoes, and cut before the Potato vines got up to cover the space between; the ground they occupied was forty-six feet by seventy feet, and would be about 3,220 square feet for each variety. Many of the vines remained green until they were lifted. The season was generally good for Potato culture; no forcing process was used whatever.

PETER ROBERTSON.

The Potato Crop.

A Paper Read at the American Institute Farmers' Club.

By Conrad Wilson.

THE annual yield of potatoes in the United States, according to the returns of the last census, was nearly one hundred and fifty million bushels. In view of the increasing attention lately given to this crop, it will doubtless show, at the close of the present decade, a large increase in the amount of the yield, as well as in the number and improvement of varieties. In fact, it may safely be assumed that, in spite of the fears of many in regard to the ravages of the beetle, this crop will still show a yield, at the next census, of over two hundred million bushels.

By its valuable qualities, and its large consumption, the potato ranks in nearly all countries as a leading food staple. It is therefore in every view important, and may always be discussed with interest and profit. There are, of course, some other crops that are grown on a larger scale, and some that foot up a larger yearly aggregate. Yet no product of husbandry is more variously useful, or more generally raised by farmers, and none, if we except wheat, more universally consumed by the people.

A few examples illustrating the rate of yield and the cost per bushel for this crop will tend to show what possibilities belong to it, and thus perhaps stimulate the average farmer to aim at higher results.

Some experiments in potato culture were reported in January of last year, of which the following are a part of the results:

H. C. Pearson, of Pitcairn, St. Lawrence Co., N. Y., produced from one pound of seed, 1,982 pounds of potatoes, of the Ruby variety. He also raised the same year, from one pound of seed, 1,707 pounds of the Alpha variety. J. I. Salter, of St. Cloud, Minn., got the same year, from one pound of seed, 1,694 pounds of the Ruby, and 1,665 pounds of the Alpha; while Alfred Rose, of Penn Yan, N. Y., got 1,576 pounds, and P. L. Wood, of Ill., 1,571 pounds, each from a pound of seed of the Ruby variety. The year previous J. L. Perkins, of Little Sioux, Iowa, obtained 1,666 pounds from one pound of the Eureka variety.

These amazing products were some of the results obtained by farmers competing for the premiums offered by B. K. Bliss & Sons of New York.

The inducements thus held out by this enterprising firm has led to valuable consequences, and the competition has developed the prolific quality of this vegetable to a degree that surpasses all previous conception.

But while duly crediting the liberality and public spirit of B. K. Bliss & Sons, and the grand success of the winning parties, we cannot help regretting that the most important question in potato culture was not included among the offers. It is easy to see that

The Cost of Production

is the underlying question which measures the importance of all the others. Yet this does not at all diminish the value of the test made by Mr. Bliss. The Rubies raised by Mr. Pearson from a pound of seed fell short of a ton by only 18 pounds. This fact has arrested the attention of potato growers as well as consumers in both hemispheres, and confers merited distinction on both Pearson and Bliss; and certainly the tendency of such facts is to help forward the solution of the still greater problem of cost. The man who gets the bottom figures in this problem, though he may not "double the blades of grass," will more than double the product of potatoes.

Since these prizes were awarded I have received statements of cost from several competitors, and hope still to hear from others.

Alfred Rose has reported his cost, in one competition, at less than 15 cents per bushel, and J. L. Perkins about the same. J. I. Salter obtained a yield in one case at about 20 cents per bushel. His latest results I have not learned. Henry V. Rose and M. M. Rose have each reported a cost slightly above the figures obtained by J. L. Perkins and the elder Mr. Rose. For the previous year, Alfred Rose reported his cost at \$55 per acre, and 9¼ cents per bushel. Mr. Perkins has also reported a later crop, since the competition, in which he makes the cost, without manure, \$5.40 per acre, and 5½ cents per bushel.

Various other farmers, since the Bliss competition, have reported to me their yield and cost for potatoes. Lyman Alexander, of Minnesota, got 400 bushels per acre of the Peerless variety, at a cost of about 7 cents per bushel.

Azro Smith, of Rock Bluffs, Nebraska, raised a crop of Extra Early Vermont, of which the yield was 824 bushels per acre, and the cost, as he made it, 4½ cents per bushel. But the cost in this instance, as also in the two previous cases, requires some correction. Every crop should be charged for interest on the land, and when no manure is used, a charge should also be made for exhaustion of soil. This would probably add 2 or 3 cents per bushel to the cost of the three last named crops.

C. C. Holton, of Rochester, N. Y., has reported potatoes at 400 bushels per acre, and at a cost of 12½ cents per bushel. A crop of 600 bushels per acre has been reported by one of the editors of the *Agriculturist*, 640 bushels by C. L. Bragdon, and 700 bushels by P. F. Rice of Polo, Ill. In one of the competitions for the Bliss prizes, Mr. Perkins obtained 376 bushels per acre, and Alfred Rose got 600 bushels of Brownells and 746 bushels of Eurekas.

Let us now take another view of the potato crop that may perhaps shed some light on its utility and value as a food staple.

Feeding Value of Potatoes.

Like Indian corn, this vegetable is everywhere extensively utilized as an article of food, both for the human family and for nearly all domestic animals. Hence it is clear that the nutritive properties of the potato are a question of no little importance to the farmer, and one on which the light of further experience is still greatly needed.

How to convert potatoes, with the best economy, and with the largest profit, into other forms of food, into milk, butter and meat, is a problem not yet fully solved. Various estimates have been made by practical men as to the effective value of the potato in the production of beef, mutton and milk; and though opinions still differ, the proportion of other food staples that potatoes are capable of yielding is nearly indicated in the following statement:

A bushel of potatoes when judiciously fed to animals of a good breed will produce:

Of Beef, - - - - -	from 2 to 3 pounds.
" Mutton, - - - - -	" 4 to 5 "
" Pork, - - - - -	" 4 to 5 "
" Milk, - - - - -	" 35 to 40 "
" Butter, - - - - -	" 2 to 2½ "

It is of course not supposed that potatoes are fed *exclusively* in producing these results, but in a suitable combination with other kinds of feed.

Now the practical value of the above table depends materially upon the amount of potatoes produced from an acre. The average yield of the crop for the whole country is probably not over 100 bushels per acre. And yet it will be seen, from the examples above reported, that over 800 bushels have been produced, and even that is not by any means the final limit of yield. Considering the recent progress of potato culture, and conceding the fact that 1,000 bushels per acre have been occasionally achieved by brilliant farmers, it seems hardly credible that the average yield for the United States is only 100 bushels per acre. What shall we say then? Shall we distrust the return of the last census? or shall we rather credit some progress to the eight intervening years, and claim that the average is now very much better. One thing at last seems clear. If the progress of the next two or three years shall correspond to the same period of the past, it may safely be assumed that the average yield of potatoes for the coming decade will not be less than 200 bushels per acre. I venture therefore to assume this figure as the coming average, and if any of our twenty million farmers are disposed to quarrel with me for claiming this yield, my best revenge will be to prove the possibility and then to tell them how it may be done.

If now we apply to this estimate the figures of the above table, we shall discover

What an Acre of Potatoes Means,

when expressed in the form of other food staples. We shall find that it is measured

In Beef, - - - - -	by 400 to 500 pounds.
" Pork, - - - - -	" 800 to 1,000 "
" Mutton, - - - - -	" 800 to 1,000 "
" Milk, - - - - -	" 7,000 pounds, or over.
" Bread, - - - - -	" 4,000 "
" Butter, - - - - -	400 "

Again, as I have already shown that the total potato product of this country is nearly certain to reach 200 million bushels as the average for the next decade, it will be seen that if the above figures are extended so as to meet this case of the total product, then it will be found that

The Annual Potato Crop of the United States

is equivalent

In Beef, - - - - -	to 400,000,000 pounds.
" Pork, - - - - -	" 800,000,000 "
" Mutton, - - - - -	" 800,000,000 "
" Milk, - - - - -	" 7,000,000,000 "
" Bread, - - - - -	" 4,000,000,000 "
" Butter, - - - - -	" 400,000,000 "

Let us now take another view of this subject. If Mr. Pearson had taken his crop of Ruby potatoes that were produced from a pound of seed, and by a right mode of feeding, had converted them into butter, according to the above estimate, the outcome of his experiment would have been about sixty pounds of butter in the Fall, as the legitimate result of one pound of potatoes planted in the Spring. Or if he had converted the potatoes into mutton, the result would have been 120 pounds.

Again, when Azro Smith harvested over 800 bushels of potatoes from one acre, if he had fed that crop to a good breed of cattle, it would have produced, according to the above estimate, at the rate of two pounds of beef for each bushel of potatoes, making a total of 1,600 pounds of beef, as the product of one acre, or if, instead of beef, he had converted the crop into milk, the result would have been over 20,000 pounds.

These results, of course, depend in part on the above estimate for the feeding value of potatoes. On this point there is room for some difference of opinion. But it would be easy to show that when potatoes are combined with other well-selected elements, and fed in the right proportion to animals of good breed, and good capacity, the estimate given is not far out of the way. But to place the matter beyond any question, if we reduce the estimate by 50 per cent., it would still be possible for Pearson to plant his pound of potatoes in the Spring, and harvest in the Fall either 30 pounds of butter, or 60 pounds of mutton; and Azro Smith would still be able to show from his acre of potatoes, that an acre of beef is equivalent to 800 pounds, and an acre of milk to 10,000 pounds.

QUEEN OF THE PRAIRIE CORN.

Among the several new kinds of Corn introduced within the last few years, none have gained as general and deserved popularity as the **Queen of the Prairie**. Being a Yellow Dent variety, its early maturity, combined with very large yield, is something astonishing. No other Dent Corn has ever been grown successfully as far North as this; planted on the 4th of July, it has fully matured its crop before frost, and it has even been planted as a second crop, after the Wheat harvest, and yielded a full and well-ripened crop.

We cannot give a better description than to quote what one of our correspondents says: "I

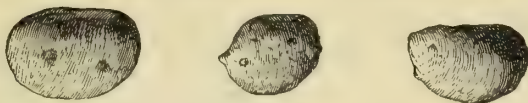
planted about five acres of this Corn, near the middle of June. The ground was too low, wet, and miry to be accessible by horse and admit of plowing; so I dug, with a hoe, holes varying from three to five feet apart, dropped in each three grains of Corn, and covered them up. Nothing more was done, no cultivation whatever given, and the yield was 750 bushels of Corn. I also planted six rows on upland alongside of our Field Corn, and under the same conditions and cultivation it yielded two bushels more. I do not hesitate



One-fourth Natural Size. Section of Ear— Natural Size.

to state that this Corn has no equal, and has these advantages, not possessed by any other: *First*. It will grow on poorer soil. *Second*. It makes no suckers. *Third*. It grows quicker and matures sooner. *Fourth*. It shells two bushels of grain from three bushels of ears." Selected ears, 25 cents; 3 lbs. shelled, \$1.00, by mail, post-paid; per peck, \$1.25; bush., \$3.50.

Dioscorea Batatas—Chinese Yam.



DIOSCOREA BATATAS—BULBLETS FROM THE AXILS OF THE LEAVES.

One of the most valuable esculents in cultivation, though but little known. Stem twelve to twenty feet in length, of rapid growth, of creeping or climbing habit, forming an excellent covering for a screen; flowers small, white in clusters; leaves, heart-shaped. The root is of a pale russet color, oblong, regularly rounded, club-shaped, largest at the lowest end. Plant eight inches apart, in a deep, light soil, tolerably rich, and thoroughly stirred two feet deep. A well grown root, two years from the bulblets, will measure two feet in length, and two and one-half inches in its broadest diameter, and is quite hardy, remaining in the ground over Winter without protection. The flesh is remarkably white, and very mucilaginous in its crude state. They may be boiled or roasted, and when cooked possess a rich-like taste; are quite farinaceous, nutritive, and valuable for food. It is also a very desirable climbing plant, suitable for covering screens, arbors, and unsightly places.

Extract from a letter in the *Rural New Yorker* from a correspondent who has cultivated this plant for many years.

"The Chinese Yam possesses merits that should commend it to the agricultural classes of the United States, yet there are many who don't even know that it is grown in this country, although it is more than twenty years since its introduction here, from China. The difficulty all new beginners have to contend with in the culture of this esculent, is a proper understanding of its wants. I have grown them for twelve or fifteen years, and will give the readers of the *RURAL* the benefit of my experience:

In the first place, select a soil that is moderately dry, deep and rich, and prepare it by spading or plowing deeply: then plant the bulblets eight inches apart each way. When the large roots are used for planting they should be cut up in pieces about one inch in length. They will produce much stronger roots than those grown from the bulblets. They will need to be cultivated a few times the first year, to keep weeds down and soil loose. After the first year, keep the weeds hoed off or mowed down, as you prefer. The Yams are perfectly hardy, standing in the ground all Winter and growing again when Spring comes, increasing in size for a number of years. They increase naturally from the small tubers that grow on the vines just above each leaf. These should be saved in the Fall, and kept during Winter where they will not freeze, as freezing injures their growth, and planted in the Spring as soon as the ground gets warm.

As to the product per acre, in the best of soil, with three years' growth and tubers planted eight inches apart each way, we could safely calculate on getting six and a quarter tons of Yams per acre. Some may think this a large yield, but I believe it is not as large as I should put it, and think it is not an overestimate. I have only cultivated them on a small scale, but have come to the above conclusion with regard to their productiveness. A few years ago, I was digging in an old bed of them where they had been left to grow for several years, and such a sight!

The ground was literally full of roots, measuring one and a half to two feet in length, and one and a half to two inches in diameter at the largest end, and this too where the soil was not more than eight or ten inches deep.

DIOSCOREA BATATAS.

CHINESE YAM—ONE YEAR OLD ROOT.

They grow in a perpendicular position with the large end downwards. The vines are ornamental, having heart-shaped leaves edged with scarlet and are very pretty. A few tubers planted near a door or window and the vines trained over and about it, make an ornament worthy the admiration of all. The flowers are numerous and have a cinnamon fragrance, but the vines do not bloom until the roots are two years old. In garden culture I let the vines run on the ground, except those I wish to save tubers from for seeds. These I set stakes or poles to, as I think by this method the tubers are produced in greater abundance and of large size.



There is scarcely any difference perceptible to the taste between the Chinese Yam, when properly cooked, and the Irish potato, although the Yam is much whiter and somewhat finer grained.

Some object to growing them on account of the great depth to which the roots penetrate. But to those I find no difficulty. I commence digging at the end of a row, take out what I want, and leave the hole open. The next time I dig I commence where I left off, and throw the dirt where I dug before; by this way I have the soil stirred so deep that it is in fine condition for planting out more tubers.

They have no insect enemy, and drought affects them but very little, as they root so deeply. There is no necessity for their being dug at any time of the year, except when wanted for immediate use. They are suitable for cooking any time in the year. A person can plant enough at one planting to do his family for years, each year bringing him larger Yams. I consider them safer to depend on than the Irish potato, which has its enemies, and is so sensitive to a little freeze.

I believe their proper cultivation would be attended with success anywhere in the United States. If the masses of the people better understood their nature and were better acquainted with their many fine qualities, they would be more generally grown. In conclusion I will say that they are the most profitable crop that I cultivate.

Small bulblets, which form roots about a foot in length, in one year, in packets of one dozen, 20 cents. \$1.50 per hundred. One year old roots \$1.25 per dozen; \$6.00 per 100.

MAPES' POTATO MANURE.

Ammonia, 4.50 to 5 per cent. Phosphoric Acid, 8 to 10. Potash, 6 to 8.

Price, per ton, 2000 lbs., **\$51.00** - - - - bag (200 lbs.) **\$5.10.**

This has proved a complete Manure for Potatoes on all lands, supplying the potash in *ample quantity*, and the phosphoric acid *even in excess* of the demands of the crops. The phosphoric acid is found in practice to be *relatively* deficient in most soils for potatoes. This is shown by the excellent results frequently attending the use on potatoes of an ammoniated superphosphate containing *no potash and little ammonia*, but *rich in phosphoric acid*. In the cases where a superphosphate or a dissolved bone act so well on this crop, there must be an ample supply of available potash as well as of magnesia, etc., in the soil itself, as is sometimes found in clay loam soils, and those of a shale or slaty character. *Sooner or later the continual culture of potatoes*, or any *other crop* requiring potash and other similar alkaline ingredients largely, and using mainly bone and phosphates, must result in getting the land *out of balance*, and the crops suffering in consequence both in quality and quantity.

In Washington County, New York, where potatoes are the main crop with many farmers, the average yield has fallen to one hundred bushels per acre, and yet, within the memory of some of the present growers, the yield per acre on the same lands has in former years been 300, 400, and even 500 bushels per acre.

The Mapes' Potato Manure supplies all the ingredients required to restore such lands as *above* named, and to permit of continued cropping of potatoes, as far as plant food is concerned, on any lands, without exhaustion of the soil. It will constantly improve the condition of the land, and leave it in better "heart" for any crop.

The liability of the crop to suffer from the ravages of the potato disease is greatly reduced by having the soil well supplied with full quantity of available plant-food. Experience has shown that on new, virgin forest soils, or those well supplied with the products of burnt brush-heaps, the disease rarely attacks the crops, even under conditions of sudden changes of weather, so favorable for the parasitical attacks and fungus growth so destructive of the crop.

DIRECTIONS FOR USE OF MAPES' POTATO MANURE.

May be used in the hills or rows, mixing and covering with earth, and distributing well.

Scatter it down the rows, mix it as thoroughly as possible, in any manner which best commends itself, with plow, hoe, brush, etc. With ordinary care, the potatoes will not be injured, and the crop will invariably be heavier than when the manure is applied broadcast. Use *two to four* bags per acre.

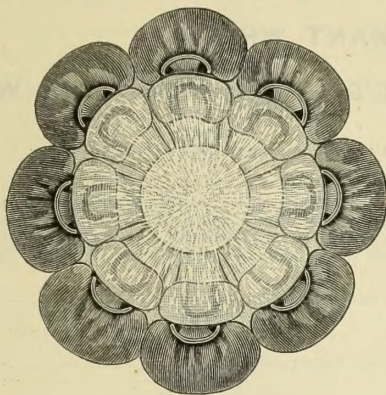
E. S. BROWNELL, ESSEX JUNCTION, VT., the well-known originator of "Brownell's Beauty," "Centennial," "Pride of America," "White Star," and other celebrated seedlings, wrote to B. K. Bliss & Sons, New York, September 27th, 1880: "I bought of you last spring some of Mapes' Potato Manure, which *excelled* any fertilizer that I ever used in *producing smooth and large tubers*. I got *one-third more crop* than was produced alongside when it was not used."

THE RURAL PREMIUM CORN.

Most readers of agricultural journals are aware of the valuable experiments carried on at the Farm of *The Rural New Yorker*, with the different farm crops. Corn has received special attention, and of the two varieties described below the Flint has been raised through forty-one successive years, while the Dent was found so much superior to other similar varieties that it was at once selected as the best in cultivation. It is with pleasure that we announce that we have been fortunate enough to secure the entire original stock, which we now offer first for sale.



One-seventh
Natural Size.



Section of Ear.
Natural Size.

or allowed to grow in a hill, and the hills themselves should *never be closer than four feet each way*. Its large yield, length of ear, and excellent quality make it a most desirable field variety throughout the Northern and Middle States while its great suckering habit, breadth of blade, and smallness of stalk will render it, as a fodder plant or for ensilage purposes, the most valuable variety of Indian Corn at present known. Price 25 cents per packet; 60 cents per pint; \$1.00 per quart, post-paid, by mail.

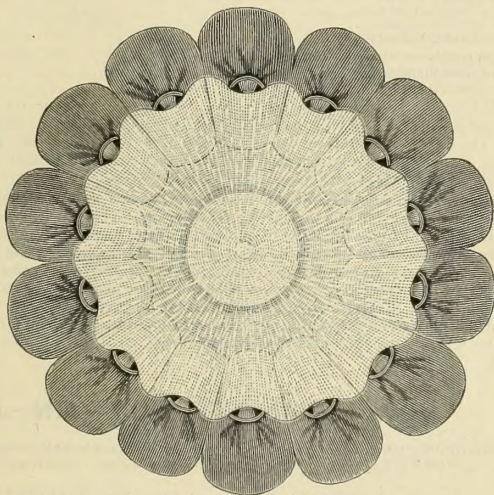
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A remarkably distinct and wonderful variety. It is a Flint Corn, and has been raised, as stated, over forty years in the *Rural's* family, isolated from all other varieties, the longest and most perfect ears only being selected for seed from year to year. It produces the longest ears of any known variety. Ears of fifteen inches in length are not uncommon, and some have even reached the enormous length of *seventeen inches*, specimens of which may be shown. It is eight-rowed, of a peculiar buff color, cob very small, and kernels large and very broad. The stalks are slender, eight to nine feet in height, and closely set with large, remarkably broad, leaves. Each seed produces upward of twelve strong suckers,—many of which mature perfect ears,—forming a regular bush, so that they cannot be distinguished from the main stalk. Owing to this spreading habit, only one kernel should be planted

THE RURAL HEAVY DENT CORN.



One-fourth Natural Size.



Section of Ear. Natural Size.

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For the best 20 heads of Green Mountain Wheat.....	8.00
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For the third best 20 heads.....	4.00
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Competitors for the prizes will be required to give the date on which they gave their order, with a statement of the weight of their crops, which must be witnessed and sworn to before a Justice of the Peace, Notary, or any one competent to administer the oath, and sent to our address before the First of November, 1883. The prizes will be paid in December, 1883.

Competitors for the premiums for the best heads of oats and wheat must deliver them at our office, 34 Barclay street, New-York (all charges prepaid), previous to the 10th of September, 1883. The straw must be cut not less than eight inches in length, exclusive of the heads, and carefully packed to prevent injury in the transportation. They can be sent by mail or express, *prepaid*, at the option of the grower. If sent by mail, they should be boxed in a light wooden or a stiff pasteboard box, the cover of which must be secured by strong twine, and not nailed or fastened in any way to prevent the examination of the parcels at the New-York post-office. No writing of any kind must be inclosed in the packages, as in that case letter postage would be charged on the whole package, and would not be taken from the office. The name of the sender must be written on the *outside* of the package, with our address. Notify us by letter when the wheat is sent.

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